

# Charaka Samhita - Volume 2

## Ayurveda

This document contains Ayurvedic knowledge from Charaka Samhita. Charaka Samhita is Ayurveda's Core Text.

This is Volume 2 from the total of 7 Volumes.

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## Ashtauninditiya Adhyaya

### Sutra Sthana Chapter 21. Eight Undesirable Physical Constitutions

#### Abstract

This is the first chapter of tetrad on guidelines on management of diseases. After enlisting eight undesirable physical appearances based on the criteria like body height, body mass, complexion and presence of hair. The extreme presence or absence of these parameters leads to undesirable physical appearances. The most commonly observed conditions in the society like morbid obesity and extreme emaciation are described in details with their causative factors, signs and symptoms, and ways of effective management. In etio-pathogenesis of these disorders, sleep is the second most important cause after diet. Therefore a special emphasis is given on the merits of sleep, qualities or characteristics that define a “good sleep” and the demerits of sleep related disorders.

**Keywords:** *Atisthaulya, Atikarshya, Morbid obesity, Hereditary and genetic Disorders, Endocrine Disorders, Sleep(Nidra), Insomnia(Anidra)*

#### Introduction

Charak has laid down the foundation of genetic/hereditary and endocrinal disorders in relation to four pairs of opposing (and undesirable) physical characteristics- height (too tall, too short), body hair (too hairy, hairless), complexion (too dark, too light), and body mass (too obese, too lean). Among these, atisthula (morbid obesity) is the most undesirable characteristic because it is associated with several life-threatening complications including diabetes, hypertension, coronary artery diseases, joint disorders, skin disorders, anorectal problems, etc. This chapter focuses on the features of a healthy physical constitution of a person, definitions of sleep, as well as key concepts associated with disease management such as etiopathogenesis, clinical presentation, prognosis, and management of atisthula. Some key etiological factors of atisthula include dietary and lifestyle indicators (e.g., sedentary habit and high-calorie diet), and genetic and hereditary factors. This chapter also describes the pathogenesis of atisthula in detail, involving rasa dhatu (plasma) and meda dhatu(adipose tissue) as important *dushyas* (affected tissues). Modern medicine has acknowledged the role of meda dhatu (adipose tissue) as a principal *dushya*, with obesity and dyslipidemia regarded as the main components of the basic matrix of this disease and its related

disorders.<sup>1 23</sup> The recent concept of “metabolic syndrome” was already recognized in Ayurveda. Biomedical science points that overweight individuals experience greatly elevated morbidity and mortality from various ailments including cardiovascular diseases.<sup>4 5</sup>

Obesity research is focused on preventive measures and management of complications like prediabetes, diabetes, metabolic syndrome, hypertension, stroke, coronary artery disease, congestive heart failure, cardiomyopathy, and arrhythmia/sudden death.<sup>6</sup>. In the modern world, obesity has emerged as a serious health issue in both developed and developing nations and is recognized as one of the most serious public health problems of the 21st century. In 2008 the WHO estimated that globally, at least 500 million adults (or approximately 1 in 10 adults) are obese, with higher rates among women than men. Obesity is the reason for about 80% of type 2 diabetes, about 70% of cardiovascular diseases, and 42% of breast and colon cancers today. In the past two decades, the number of overweight children and adolescents has doubled.<sup>7</sup> The rate of obesity also increases with age at least up to 50 or 60 years old. Once considered a problem

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<sup>1</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>2</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

<sup>3</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

<sup>4</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

<sup>5</sup> K Waller, T J Prendergast, A Slagle, R J Jackson.Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

<sup>6</sup> Sushruta. Uttara Tantra, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. Sushruta Samhita. 8th ed. Varanasi: Chaukhamba Orientalia;2005.

<sup>7</sup> Vaghbata. Uttara Sthana, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. Ashtanga Hridayam. 1st ed. Varanasi: Krishnadas Academy;2000.

specific to only high-income countries, obesity has acquired pandemic proportions and is affecting people globally.<sup>8 9</sup>

Any course of treatment for obesity suggested by modern medical practitioners primarily includes dietary changes and physical exercise followed by anti-obesity drugs that help reduce appetite or inhibit fat absorption. In severe cases, various invasive and non-invasive surgical procedures could be prescribed - such as partial gastrectomy, gastric bypass, banding, gastric balloons, etc.<sup>10</sup> However, Ayurveda's approach to weight management is very different. Instead, Ayurveda advocates dietary restrictions according to the prakriti (basic constitution), moderate exercise, practice of yoga postures (yogasanas) and breathing exercises( pranayama), besides certain ayurvedic medications and bio-purificatory measures for its management.<sup>11</sup>

The etiology, pathogenesis, clinical features and consequences of extreme leanness (atikrisha), as an outcome of decrease of rasa dhatu), meda dhatu, and mamsa dhatu have also been described in this chapter. The two basic approaches for management of atikrisha and atisthula are augmentation (brimhana) and depletion (karshana) of body tissues respectively. Various drug and non-drug modalities have been suggested for the replenishment of dhatu and their nourishment to attain good health. In this regard, Rasayana drugs help balance hormones, promote essential nutrition and enhance immunity to atisthula and atikrisha respectively. As mentioned earlier, this chapter also emphasizes the role of good nidra (sleep) in maintaining a healthy life. In fact, as per Ayurveda, after ahara (diet), nidra is one of the three sub-pillars of life (*trayopastambha*) and has a significant place in preventive medicine because normal sleep helps prevent diseases and unwholesome sleep may lead to fatal diseases. In Ayurveda, nidra is considered a brimhana (nourishing) agent that promotes physical and mental health and enhances immunity. [Cha.Sa.Sutra Sthana11/35]

### Sanskrit text, transliteration and english translation

अथातोऽष्टौनिन्दितीयमध्यायं व्याख्यास्यामः॥१॥

इति ह स्माह भगवानात्रेयः॥२॥

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<sup>9</sup> extract sourced from

<http://cosbin2001.blogspot.com/2014/12/health-benefits-of-jaggery-or-gur.html>

<sup>10</sup> Shastri KN, Chaturvedi GN, Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shastri KN, Chaturvedi GN, Editors. Vidyotini Commentary Charak Samhita.1st ed. Varanasi: Chaukhamba Bharti Academy;2004.

<sup>11</sup> Shukla VD, Tripathi RD. Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shukla VD, Tripathi RD Vaidyamanorama Commentary Charak Samhita.1st ed. Delhi; Chaukhamba Sanskrit Pratisthana, 2002.

athātō'stauninditīyamadhyāyāṁ vyākhyāsyāmāḥ||1|| iti ha smāha bhagavānātrēyah||2||

athAto~aShTauninditlyamadhyAyaM vyAkhyAsyAmaH||1|| iti ha smAha  
bhagavAnAtreyaH||2||

Now we shall expound the chapter “Ashtauninditiya” (Eight undesirable physical appearances). Thus said Lord Atreya [1-2]

## Eight undesirable physical appearances

इह खलु शरीरमधिकृत्याष्टौ पुरुषा निन्दिता भवन्ति; तद् यथा- अतिदीर्घश्च, अतिहस्वश्च, अतिलोमा च, अलोमा च, अतिकृष्णश्च, अतिगौरश्च, अतिस्थूलश्च, अतिकृशश्चेति॥३॥

iha khalu śarīramadhikṛtyāṣṭau puruṣā ninditā bhavanti; tadyathā- atidīrghaśca, atihrasvaśca, atilōmā ca, alōmā ca, atikṛṣṇaśca, atigauraśca, atisthūlaśca, atikṛṣāścēti॥३॥

iha khalu sharīramadhikRutyAShTau puruShA ninditA bhavanti; tadyathA- atidIrghashca, atihrasvashca, atilomA ca, alomA ca [1] , atikRuShNashca, atigaurashca,atisthUlashca, atikRushashceti॥३॥

In the context of the body (structure and appearance), the following eight types of persons are considered undesirable - too tall, too short, too hairy, hairless, too dark, too light (complexioned), too obese and too lean [3]

## Obesity and leanness

### Eight inherent sequelae of obesity

तत्रातिस्थूलकृशयोभ्य एवापरे निन्दितविशेषा भवन्ति । अतिस्थूलस्य तावदायषो हासो जवोपरोधः कृच्छ्रव्यवायता दौर्बल्यं दौर्गन्धं स्वेदाबाधः क्षुदतिमात्रं पिपासातियोगश्चेति भैवन्त्यष्टौ दोषाः। तदतिस्थौल्यमतिसम्पूरणादगुरुमधरशीतस्निग्धोपयोगादव्यवायामादव्यवायाद्दिवास्वप्नादधर्षनित्यत्वा द-चिन्तनाद्बीजस्वभावाच्चोपजायते । तस्य हयतिमात्रमेदस्विनो मेद एवोपचीयते न तथेतरे धातवः, तस्मादस्यायुषो हासः; शैथिल्यात् सौकुमार्यादगुरुत्वाच्चमेदसो जवोपरोधः, शुक्राबहुत्वान्मेदसाऽवृत्तमार्गत्वाच्च कृच्छ्रव्यवायता, दौर्बल्यमसमत्वादधातूनां, दौर्गन्धयं मेदोदोषान्मेदसः स्वभावात् स्वेदनत्वाच्च, मेदसः । श्लेष्मसंसर्गादविष्यनिन्दित्वादबहुत्वादगुरुत्वादव्यायामासहत्वाच्च स्वेदाबाधः, तीक्ष्णाग्नित्वात् प्रभूतकोष्ठवायुत्वाच्च क्षुदतिमात्रं पिपासातियोगश्चेति ॥४॥

tatrātisthūlakṛśayōrbhūya ēvāparē ninditaviśeṣā bhavantī| atisthūlasya tāvadāyuṣō hrāsō javōparōdhah kṛcchravyavāyatā daurbalyāṁ daurgandhyāṁ svēdābādhaḥksudatimātram pipāsātiyogaścēti bhavantyaṣṭau dōṣāḥ| tadaṭisthāulyamatisampūraṇādgurumadhuraśītasnigdhōpayōgādavyavāyāmādavyavāyādd ivāsvapnāddharṣanatyatvāda-cintanādbījasvabhāvāccōpajāyatē| tasya hyatimātramēdasvinō mēda ēvōpacīyatē na tathētarē dhātavah, tasmādasyyāyuṣō hrāsah; śaithilyātsaukumāryādgurutvācca mēdasō javōparōdhah, Śukrābahutvānmēdasā” vṛtamārgatvācca kṛcchravyavāyatā, daurbalyamasamatvāddhātūnāṁ, daurgandhyāṁ mēdōdōṣānmēdasah svabhāvāt svēdanatvācca,

Mēdasahślēśmasaṁsargādvisyanditvādbahutvādgurutvādvyāyāmāsaḥatvācca  
svēdābādhah, tīkṣṇāgnitvātprabhūtakōṣṭhavāyutvācca kṣudatimātram  
pipāsātiyogaścēti||4||

tatrAtisthUlakRushayorbhUya evApare ninditavisheShA bhavanti| atisthUlaśya  
tAvadAyuSho hrAso javoparodhaH kRucchravyavAyatA daurbalyaM daurgandhyam  
svedAbAdhaH kShudatimAtraM pipAsAtiyogashcetibhavantyaShTau doShAH|  
tadatisthauṇyamatisampUraNAdgurumadurashItasnigdhopayogAdavyAyAmAdavyavAy  
AddivAsvapnAddharShanityatvAda- cintanAdbljasvabhAvAccopajAyate| tasya  
hyatimAtramedasvino meda evopaclyate na tathetare dhAtavaH, tasmAdasyAyuSho  
hrAsaH; shaithilyAt saukumAryAdgurutvAcca medaso javoparodhaH  
,shukrAbahutvAnmedasA\_aavRutamArgatvAcca kRucchravyavAyatA,  
daurbalyamasamatvAddhAtUnAM, daurgandhyam medodoShAnmedasaH  
svabhAvAtsvedanatvAcca, medasaH  
shleShmasaMsargAdviShyanditvAdbahutvAdgurutvAdvyAyAmAsahatvAcca  
svedAbAdhaH, tlkShNAgnitvAt prabhUtakoShThavAyutvAccakShudatimAtraM  
pipAsAtiyogashceti||4||

Amongst these, the too obese and too lean physical appearances are considered the most undesirable ones. The excessively obese have eight inherent defects in them: reduced lifespan, constricted or limited movement (hampered due to loose, tender and heavy fats), reduced sexual activities or impotence (due to small quantity of semen produced and obstruction of the channel of semen by meda dhatu), debility (due to dhatu imbalance), emit bad smell (due to the inherent nature of fatty tissues as well as excessive sweating), profuse sweating (since meda dhatu and kapha are vitiated), and excessive hunger and thirst (due to excessive digestive *agni* and *vayu* in the body). Excessive obesity is caused due to over-nourishment as a consequence of the intake of a heavy, sweet, cold and fatty diet, lack of physical exercise, abstinence from sexual intercourse, sleeping during the day, uninterrupted cheerfulness, lack of mental activities, and hereditary/genetic defects. These consequences may lead to an excess of fat (with further accumulation of only fat) and consequent depletion of dhatu. [4]

### *Pathophysiology of Obesity*

भवन्ति चात्र- मेदसाऽवृतमार्गत्वाद् वायुः कोष्ठे विशेषतः| चरन् सन्धुक्षयत्यग्निमाहारं शोषयत्यपि||५||  
तस्मात् स शीघ्रं जरयत्याहारं चातिकाङ्क्षति| विकारांश्चाशनुते घोरान् कांशिचत्कालव्यतिक्रमात्||६||  
एतावुपद्रवकरौ विशेषादग्निमारुतौ| एतौ हि दहतः स्थूलं वनदावो वनं यथा||७||  
मेदस्यतीव संवृद्धे सहसैवानिलादयः| विकारान् दारुणान् कृत्वा नाशयन्त्याशु जीवितम्||८||  
मेदोमांसातिवृद्धत्वाच्चलस्फिगुदरस्तनः| अयथोपचयोत्साहो नरोऽतिस्थूल उच्यते||९||  
इति मेदस्विनो दोषा हेतवो रूपमेव च| निर्दिष्टं, ....||१०||

bhavanti cātra- mēdasā”vṛtamārgatvādvāyuh kōṣṭhē viśēṣataḥ| caran  
sandhukṣayatyagnimāhāram śōṣayatyapi||5||

tasmāt sa śīghram jarayatyāhāram cātikāṅkṣati| vikārāṁścāśnute ghōrān  
kāṁścitkālavyatikramāt||6||

ētāvupadravakarau viśeṣādagnimārutau| ētau hi dahataḥ sthūlam vanadāvō vanam  
yathā||7||

mēdasyatīva samvṛddhē sahasaivānilādayah| vikārān dāruṇān kṛtvā nāśayantyāśu  
jīvitam||8||

mēdōmāṁsātivṛddhatvāccalasphigudarastanah| ayathōpacayōtsāhō narō'tisthūla  
ucyatē||9||

iti mēdasvinō dōṣā hētavō rūpamēva ca| nirdiṣṭam, ....|10|

bhavanti cAtra- medasA<sub>a</sub>avRutamArgatvAdvAyuH koShThe visheShataH| caran  
sandhukShayatyagnimAhAraM shoShayatypi||5||

tasmAt sa shlghraM jarayatyAhAraM cAtikA~gkShati| vikArAMshcAshnute ghorAn  
kAMshcitkAlavyatikramAt||6||

etAvupadravakarau visheShAdagnimArutau| etau hi dahataH sthUlaM vanadAvo vanaM  
yathA||7||

medasyatva saMvRuddhe sahasaivAnilAdayaH| vikArAn dAruNAn [1] kRutvA  
nAshayantyAshu jīvitam||8||

medomAMsAtivRuddhatvAccalasphigudarastanaH| ayathopacayotsAho [2]  
naro~atisthUla ucyate||9||

iti medasvino doShA hetavo rUpameva ca| nirdiShTaM, ....|10|

Due to the obstruction of body channels by meda dhatu, the movement of vata is specially confined to *koshtha* (abdominal viscera) resulting in the stimulation of digestive power and absorption of food. Hence, the person digests food quickly and becomes a voracious eater. By not following rules of taking meals at specific times during the day, he is afflicted by dreadful diseases. *Agni* (pitta component responsible for digestion) and vata are the two most troublesome factors from the standpoint of obesity. These factors blight an obese person as wildfire destroys a forest. As the body gains excessive fat, vitiated dosha suddenly cause severe diseases resulting in rapid deterioration of life. The person is considered too obese when there is an excessive increase in fat and muscle tissue in the regions of buttocks, abdomen, and breasts, which become pendulous and suffer from deficient metabolism and energy. These are the causes, signs, and symptoms of an obese person [5-10]

#### *Features of an excessively lean person*

... वक्ष्यते वाच्यमतिकाशर्ये त्वतः परम्॥१०॥

सेवा रक्षान्नपानानां लङ्घनं प्रमिताशनम्| क्रियातियोगः शोकश्च वेगनिद्राविनिग्रहः॥११॥

रुक्षस्योदवर्तनं स्नानस्याभ्यासः प्रकृतिर्जरा। विकारानुशयः क्रोधः कुर्वन्त्यतिकृशं नरम्॥१२॥  
 व्यायाममतिसौहित्यं क्षुत्पिपासामयौषधम्। कृशो न सहते तद्वदतिशीतोष्णमैथुनम्॥१३॥  
 प्लीहा कासः क्षयः श्वासो गुल्मोऽर्शास्युदराणि च। कृशं प्रायोऽभिधावन्ति रोगाश्च ग्रहणीगताः॥१४॥  
 शुष्कस्फिगुदरग्रीवो धमनीजालसन्ततः। त्वगस्थिशेषोऽतिकृशः स्थूलपर्वा नरो मतः॥१५॥  
 ... vakṣyatē vācyamatikārśyē tvataḥ param॥10॥

sēvā rūkṣānnapānānāṁ laṅghanāṁ pramitāśanam| kriyātiyōgaḥ śōkaśca  
 vēganidrāvinigrahah॥11॥

rūkṣasyōdvartanāṁ snānasyābhyaśah prakṛtirjarā| vikārānuśayah krōdhaḥ  
 kurvantyatikṛśāṁ naram॥12॥

vyāyāmamatisauhityaṁ kṣutpipāsāmayauṣadham | kṛśo na sahatē  
 tadavadatiśītōṣṇamaithunam॥13॥

plīhā kāsaḥ kṣayaḥ śvāsō gulmō'rśāṁsyudarāṇi ca| kṛśāṁ prāyo'bhidhāvanti rōgāśca  
 grahanīgatāḥ॥14॥

śuṣkasphigudaragrīvō dhamanījālasantataḥ| tvagasthiśeṣō'tikṛśaḥ sthūlaparvā narō  
 mataḥ॥15॥

... vakShyate vAcyamatikArshye tvataH param॥10॥

sevA rUkShAnnapAnAnAM la~gghanaM pramitAshanam| kriyAtiyogaH shokashca  
 veganidrAvinigrahaH॥11॥

rUkShasyodvartanaM snAnasyAbhyAsaH prakRutirjarA| vikArAnushayaH krodhaH  
 kurvantyatikRushaM naram॥12॥

vyAyAmamatisauhityaM kShutpipAsAmayauShadham [1] | kRusho na sahate  
 tadavadatishItoShNamaithunam॥13॥

pllhA kAsaH kShayaH shvAso gulmo~arshAMsyudarANi ca| kRushaM  
 prAyo~abhidhAvanti [2] rogAshca grahaNIgatAH॥14॥

shuShkasphigudaragrIvo dhamanljAlasantataH| tvagasthisheSho~atikRushaH  
 sthUlparvA naro mataH॥15॥

Hereafter, the features of an excessively lean person will be explained by etiology, signs, symptoms and defects. Indulgence in the intake of dry (non-unctuous) diets and drinks, fasting, intake of food in inadequate quantity, overuse of therapeutic purificatory measures, grief, suppression of natural urges, inadequate sleep or sleep deprivation, dry powder massage, indulgence in baths, heredity, old age, continued illness and anger make a person too lean.

The excessively lean person does not tolerate physical exercise, intake of food in large quantities, hunger, thirst, diseases, and drugs. They also cannot tolerate too much cold,

heat and sexual intercourse. Such a person is often associated with splenic diseases, cough, wasting, dyspnoea, gulma (abdominal tumor), piles, abdominal disorders and disorders of grahani. The excessively lean person has dried up buttocks, abdomen and neck, the prominent vascular network is mostly “skin and bones” with thickened nodes [10-15]

सततं व्याधितावेतावतिस्थूलकृशौ नरौ। सततं चोपचर्यो हि कर्शनैर्बृहणैरपि॥१६॥

स्थौल्यकाश्ये वरं काश्ये समोपकरणौ हि तौ। यद्युभौ व्याधिरागच्छेत् स्थूलमेवातिपीडयेत्॥१७॥

satatarṁ vyādhitāvētāvatisthūlakṛśau narau| satatarṁ cōpacaryau hi  
karśanairbṛṁhaṇairapi||16||

sthaulyakārṣyē vararṁ kārṣyarṁ samōpakaraṇau hi tau| yadyubhau vyādhirāgacchēt  
sthūlamēvātipīḍayēt||17||

satataM vyAdhitAvetAvatisthUlakRushau narau| satataM copacaryau hi  
karshanairbRuMhaNairapi||16||

sthaulyakArshye varaM kArshyaM samopakaraNau hi tau| yadyubhau vyAdhirAgacchet  
sthUlamevAtipIDayet||17||

Both these undesirable types of people (too obese and too lean) always suffer from some disease or the other and need to be constantly managed by bulk-reducing and bulk-promoting therapies respectively. Of the two, lean is less harmful than obese, and the physical and mental sufferings in the case of an obese person are far greater in comparison to a lean person [16-17]

#### *The importance of ideal body proportion*

सममांसप्रमाणस्तु समसंहननो नरः। दृढेन्द्रियो विकाराणां न बलेनाभिभूयते॥१८॥

क्षुत्पिपासातपसहः शीतव्यायामसंसहः। समपक्ता समजरः सममांसचयो मतः॥१९॥

samamāṁsapramāṇastu samasamhananō narah| dṛḍhēndriyō vikārāṇāṁ na  
balēnābhībhūyatē||18||

kṣutpipāsātapaśahāḥ śītavyāyāmasaṁsahāḥ| samapaktā samajarah samamāṁsacayō  
mataḥ||19||

samamAMsapramANastu samasaMhanano naraH| dRuDhendriyo vikArANAM na  
balenAbhibhUyate||18||

kShutpipAsAtapasahaH shltavyAyAmasaMsahaH| samapaktA samajaraH  
samamAMsacayo mataH||19||

A person with a balanced proportion of muscles and compactness of the body and firmness in sense organs is not overcome by the onslaught of disorders. Such people can tolerate hunger, thirst, the heat of the sun, cold and physical exercise. Their

digestion, assimilation of food and muscle metabolism is in a state of equilibrium.  
[18-19]

### *The best diet for obese and lean persons*

गुरु चातर्पणं चेष्टं स्थूलानां कर्शनं प्रति| कृशानां बृहणार्थं च लघु सन्तर्पणं च यत्॥२०॥

guru cātarpaṇam cēṣṭam sthūlānām karśanam prati| kṛśānām bṛhmaṇārthaṁ ca laghu santarpaṇam ca yat॥२०॥

guru cAtarpaNaM ceShTaM sthUIAnAM karshanaM prati| kRushAnAM  
bRuMhaNArthaM ca laghu santarpaNaM ca yat॥२०॥

Heavy and non-nourishing (diet) therapy are prescribed for slimming in the case of the too obese, while for promoting the bulk of the too lean light and nourishing therapy is prescribed [20]

### *Management of obesity*

वातधनान्यन्नपानानि श्लेषमेदोहराणि च| रुक्षोष्णा बस्तयस्तीक्ष्णा रुक्षाणयुद्वर्तनानि च॥२१॥

गुड्यीभद्रमुस्तानां प्रयोगस्त्रैफलस्तथा| तक्रारिष्टप्रयोगश्च प्रयोगो माक्षिकस्य च॥२२॥

विडङ्गं नागरं क्षारः काललोहरजो मधु| यवामलकचूर्णं च प्रयोगः श्रेष्ठ उच्यते॥२३॥

बिल्वादिपञ्चमूलस्य प्रयोगः क्षौद्रसंयुतः| शिलाजतुप्रयोगश्च साग्निमन्थरसः परः॥२४॥

प्रशातिका प्रियडगुश्च श्यामाका यवका यवाः| जूर्णाह्वा: कोद्रवा मुद्गा: कुलत्थाश्चक्रमुद्गकाः ||२५||

आढकीनां च बीजानि पटोलामलकैः सह| भोजनार्थं प्रयोज्यानि पानं चानु मधूदकम्॥२६॥

अरिष्टांश्चानुपानार्थं मेदोमांसकफापहान्| अतिस्थौल्यविनाशाय संविभज्य प्रयोजयेत्॥२७॥

प्रजागरं व्यवायं च व्यायामं चिन्तनानि च| स्थौल्यमिच्छन् परित्यक्तुं क्रमेणाभिप्रवर्धयेत्॥२८॥

vātaghnānyannapānāni ślēṣmamēdōharāṇi ca| rūkṣōṣṇā bastayastīkṣṇā  
rūkṣāṇyudvartanāni ca॥२१॥

guḍūcībhadrāmustānām prayōgastraiphalastathā| takrāriṣṭaprayōgaśca prayōgo  
mākṣikasya ca॥२२॥

viḍāṅgam nāgarām kṣāraḥ kālalōharajō madhu| yavāmalakacūrṇām ca prayogaḥ  
śrēṣṭha ucyatē॥२३॥

bilvādipañcamūlasya prayogaḥ kṣaudrasaṁyutah| śilājatuprayogaśca  
sāgnimantharasaḥ parah॥२४॥

praśātikā priyaṅguśca śyāmākā yavakā yavāḥ| jūrṇāhvāḥ kōdravā mudgāḥ  
kulathāścakramudgakāḥ ||२५||

āḍhakīnām ca bījāni paṭolāmalakaiḥ saha| bhōjanārthaṁ prayōjyāni pānam cānu  
madhūdakam॥२६॥

aristāṁścānupānārthē mēdōmāṁsakaphāpahān| atisthaulyavināśāya saṁvibhajya  
prayōjayēt||27||

prajāgaran̄ vyavāyam̄ ca vyāyāmar̄ cintanāni ca| sthaulyamicchan parityaktum̄  
kramēṇābhipravardhayēt||28||

vAtaghAnyannapAnAni shleShmamedoharANi ca| rUkShoShNA bastayastlkShNA  
rUkShANyudvartanAni ca||21||

guDUclbhadramustAnAM prayogastraiphalastathA| takrAriShTaprayogashca prayogo  
mAkShikasya ca||22||

viDa~ggaM nAgaraM kShAraH kAlaloharajo madhu| yavAmalakacUrNaM ca prayogaH  
shreShTha ucyate||23||

bilvAdipa~jcamUlasya prayogaH kShaudrasaMyutaH| shilAjatuprayogashca  
sAgnimantharasaH paraH||24||

prashAtikA priya~ggushca shyAmAkA yavakA yavAH| jUrNAhvAH kodravA mudgAH  
kulatthAshcakramudgakAH [1] ||25||

ADhakInAM ca bljAni paTolAmalakaiH saha| bhojanArthaM prayojyAni pAnaM cAnu  
madhUdakam||26||

ariShTAMshcAnupAnArthe medomAMsakaphApahAn| atisthaulyavinAshAya  
saMvibhajya prayojayet||27||

prajAgaraM [2] vyavAyaM ca vyAyAmaM cintanAni ca| sthaulyamicchan parityaktuM  
krameNAbhipravardhayet||28||

Food and drinks that alleviate vata and reduce kapha and meda dhatu (fat), enema with sharp, ununctuous and hot drugs, therapeutic powder massage, use of *guduchi* (*Tinospora cordifolia* Miers), *musta* (*Cyperus rotundus* Linn), *triphalā* (haritaki-Terminalia chebula Linn, *bibhitaka*(Terminalia belerica Roxb) and *amalaka* (*Emblica officinalis* Gaertn), *takrarishta* (a fermented medicinal preparation of buttermilk) and honey are recommended for the management of obesity. A formulation prepared from *vidanga* (*Embelia ribes* Burm f.), *nagara* (*Zingiber officinale* Rose), *yavakshara* (alkali preparation of barley), ash powder of black iron along with honey, powder of *yava* (*Hordeum vulgare* Linn) and *amalaka* (*Emblica officinalis* Gaertn) is also an excellent weight-loss drug. Similarly, *Bilvadi panchamula* (five major roots) mixed with honey and shilajatu along with the juice of *agnimantha* (*Clerodendrum phlomidis* Linn.f.) are also very effective preparations for weight-loss.

A diet consisting of *prashatika* (*Setaria italic Beauv.*), *priyangu* (*Aglaia roxburghiana* Mig.), *shyamaka* (*Echinochloa frumentae* Linn.), *yavaka* (small variety of *Hordeum vulgare* Linn), *yava* (*Hordeum vulgare* Linn), *jurnahva* (*Sorghum vulgare* Linn), *kodrava* (*papalum scrobiculatum* Linn.), *mudga* (*Phaseolus mungo* Linn.), *kulattha* (*Dolichos biflorus* Linn.), *chakramudgaka*, *adhaki* (*Cajanus cajan* Millsp.) along with *patola* (*Trichosanthes cucumerina* Linn) and *amalaka* (*Emblica officinalis* Gaertn) is very

effective in tackling obesity and maintaining good health. Honey water and alcoholic preparations may be taken as postprandial drinks that help in reducing excessive fat and muscle tissues, while also alleviating kapha dosha.

One desirous of reducing obesity should indulge more and more in vigil, sexual activities, as well as physical and mental exercises [21-28]

#### *Management of leanness*

स्वप्नो हर्षः सुखा शय्या मनसो निर्वृतिः शमः। चिन्ताव्यवायव्यायामविरामः प्रियदर्शनम्॥२९॥

नवान्नानि नवं मद्यं ग्राम्यानूपौदका रसाः। संस्कृतानि च मांसानि दधि सर्पिः पयांसि च॥३०॥

इक्षवः शालयो माषा गोधूमा गुडवैकृतम्। बस्तयः स्निग्धमधुरास्तैलाभ्यङ्गश्च सर्वदा॥३१॥

स्निग्धमुद्वर्तनं स्नानं गन्धमाल्यनिषेवणम्। शुक्लं वासो यथाकालं दोषाणामवसेचनम्॥३२॥

रसायनानां वृष्याणां योगानामुपसेवनम्। हत्वाऽतिकाश्यमाधते नृणामुपचयं परम्॥३३॥

अचिन्तनाच्च कार्याणां ध्रुवं सन्तर्पणेन च। स्वप्नप्रसङ्गाच्च नरो वराह इव पुष्यति॥३४॥

svapnō harṣah sukhā śayyā manasō nirvṛtiḥ śamah| cintāvyavāyavyāyāmavirāmaḥ  
priyadarśanam||29||

navānnāni navam madyam grāmyānūpaudakā rasāḥ| saṁskṛtāni ca mārīṣāni dadhi  
sarpiḥ payāṁsi ca||30||

ikṣavaḥ śālayo māśā gōdhūmā guḍavaikṛtam| bastayaḥ  
snigdhamadhuṛastailābhyaṅgaśca sarvadā||31||

snigdhamudvartanam snānam gandhamālyaniṣēvanam| śuklam vāsō yathākālam  
dōṣāṇāmavasēcanam||32||

rasāyanānāṁ vṛṣyāṇāṁ yōgānāmupasēvanam| hatvā'tikārśyamādhattē  
nṛṇāmupacayām param||33||

acintanācca kāryāṇāṁ dhruvam santarpaṇēna ca| svapnaprashaṅgācca narō varāha iva  
puṣyati||34||

svapno harShaH sukhA shayyA manaso nirvRutiH shamaH|  
cintAvyavAyavyAyAmavirAmaH priyadarshanam||29||

navAnnAni navaM madyaM grAmyAnUpaudakA rasAH| saMskRutAni ca mAmsAni  
dadhi sarpiH payAMsi ca||30||

ikShavaH shAlayo mAshaH godhUmA guDavaikRutam| bastayaH  
snigdhamadhuRastailAbhya~ggashca sarvadA||31||

snigdhamudvartanaM snAnaM gandhamAlyaniShevaNam| shuklaM vAso yathAkAlaM  
doShANAmaVasecanam||32||

rasAyanAnAM vRuShyANAM yogAnAmupasevanam| hatvA~atikArshyamAdhatte  
nRuNAmupacayaM param||33||

acintanAcca kAryANAM dhruvaM santarpaNena ca| svapnaprasa~ggAcca naro varAha  
iva puShyati||34||

Sleep, exhilaration, comfortable bed, contentment, relaxed mind, abstinence from anxiety, sexual act and physical exercise, cheerfulness, newly harvested cereals, fresh wine, meat soup of animals residing in domestic, marshy and aquatic areas, well-cooked and prepared meat, curd, ghee, milk, sugarcane, *shali* rice, *masha* (*Phaseolus radiates* Linn.), wheat and its products, jaggery and its products, enema consisting of unctuous and sweet drugs, regular oil massage, unctuous bath, use of fragrance and garlands, use of white dress, elimination of *doshas* in due time and regular use of rejuvenating and aphrodisiac formulations to reduce excessive leanness and nourish the body. Besides, freedom from anxiety about any work, intake of nourishing diet and adequate sleep makes the man too obese like a pig [29-34]

### Concept of Nidra (sleep)

#### *Physiological mechanism of sleep*

यदा तु मनसि क्लान्ते कर्मात्मानः क्लमान्विताः | विषयेभ्यो निवर्तन्ते तदा स्वपिति मानवः||३५||

yadā tu manasi klāntē karmātmānaḥ klamānvitāḥ | viṣayēbhyo nivartantē tadā svapiti  
mānavah||35||

yadA tu manasi kIAnte karmAtmAnaH klamAnvitAH | viShayebhyo nivartante tadA  
svapiti mAnavaH||35||

An individual falls asleep when his mind including the sensory and motor organs get exhausted, and they dissociate themselves from their objects. [35]

#### *Benefits of sleep*

निद्रायतं सुखं दुःखं पुष्टिः काश्यं बलाबलम्| वृषता क्लीबता ज्ञानमज्ञानं जीवितं न च||३६||

अकालेऽतिप्रसङ्गाच्च न च निद्रा निषेविता| सुखायुषी पराकुर्यात् कालरात्रिरिवापरा||३७||

सैव युक्ता पुनर्युद्धक्ते निद्रा देहं सुखायुषा| पुरुषं योगिनं सिद्ध्या सत्या बुद्धिरिवागता||३८||

nindrāyattam sukham duḥkham puṣṭih kārṣyam balābalam| vṛṣatā klībatā  
jñānamajñānam jīvitam na ca||36||

akālē'tiprasaṅgacca na ca nindrā niṣēvitā| sukhāyusī parākuryāt kālarātririvāparā||37||

saiva yuktā punaryuṇktē nindrā dēham sukhāyusā| puruṣam yōginam siddhyā satyā  
buddhirivāgatā||38||

nindrAyattam sukhaM duHkhaM puShTiH kArshyaM baLAbalam| vRuShatA kllbatA  
jJAnamajAnaM jlvitam na ca||36||

akA<sub>le</sub><sub>atiprasa</sub>ggAcca na ca nidrA niShevitA| sukhAyuShI parAkuryAt [1]  
kAlarAtririvAparA||37||

saiva yuktA punaryu~gkte nidrA dehaM sukhAyuShA| puruShaM yoginaM siddhyA  
satyA buddhirivAgatA||38||

In human beings, happiness and misery, nourishment and emaciation, strength and weakness, fertility and infertility, knowledge and ignorance, and longevity and death depend upon proper (and improper sleep). Untimely, excessive sleep and sleep deprivation take away both happiness and longevity from a person. Similarly, proper sleep brings about happiness and longevity in human beings just as real knowledge brings about spiritual power in yogis [36-38]

#### *Indications of daytime sleep*

गीताध्ययनमद्यस्त्रीकर्मभाराध्वकर्शिताः| अजीर्णिनः क्षताः क्षीणा वृद्धा बालास्तथाऽबलाः||३९||

तृष्णातीसारशूलार्ताः श्वासिनो हिक्किनः कृशाः| पतिताभिहतोन्मत्ताः क्लान्ता यानप्रजागरैः||४०||

क्रोधशोकभयक्लान्ता दिवास्वप्नोचिताश्च ये| सर्व एते दिवास्वप्नं सेवेरन् सार्वकालिकम्||४१||

धातुसाम्यं तथा हयेषां बलं चाप्युपजायते| श्लेष्मा पुष्णाति चाङ्गानि स्थैर्यं भवति चायुषः||४२||

ग्रीष्मे त्वादानरूक्षाणां वर्धमाने च मारुते| रात्रीणां चातिसङ्क्षेपाद् दिवास्वप्नः प्रशस्यते||४३||

गीताध्ययनमद्यस्त्रीकर्मभाराध्वकर्शिताः| अजीर्णिनः क्षताः क्षीणा वृद्धा बालास्तथाऽबलाः||३९||

तृष्णातीसारशूलार्ताः श्वासिनो हिक्किनः कृशाः| पतिताभिहतोन्मत्ताः क्लान्ताः  
यानप्रजागरैः||४०||

क्रोधशोकभयक्लान्ता दिवास्वप्नोचिताश्च ये| सर्व एते दिवास्वप्नम् सेवेरान्  
सार्वकालिकम्||४१||

धातुसाम्यान् तथाः ह्येषां बलान् चाप्युपजायते| श्लेष्मा पुष्णाति चाङ्गानि स्थैर्यान्  
भवति चायुषाः||४२||

ग्रीष्मे त्वादानरूक्षाणां वर्धमाने च मारुते| रात्रीणां चातिसङ्क्षेपाद् दिवास्वप्नः प्रशस्यते||४३||

गीताध्ययनमद्यस्त्रीकर्मभाराध्वकर्शिताः| अजीर्णिनः क्षताः क्षीणा वृद्धा बालास्तथाऽबलाः||३९||

तृष्णातीसारशूलार्ताः श्वासिनो हिक्किनः कृशाः| पतिताभिहतोन्मत्ताः क्लान्ताः  
यानप्रजागरैः||४०||

क्रोधशोकभयक्लान्ता दिवास्वप्नोचिताश्च ये| सर्व एते दिवास्वप्नम् सेवेरान्  
सार्वकालिकम्||४१||

धातुसाम्यान् तथाः ह्येषां बलान् चाप्युपजायते| श्लेष्मा पुष्णाति चाङ्गानि स्थैर्यान्  
भवति चायुषाः||४२||

grIshme tvAdAnarUkShANAM vardhamAne ca mArute| rAtriNAM  
cAtisa~gkShepAddivAsvapnaH prashasyate||43||

Sleeping during the day is advocated for those who are exhausted on account of singing, reading, alcoholic drinking, sexual intercourse, elimination therapy, carrying heavy weight, walking long distances, suffering from phthisis, wasting, thirst, diarrhea, colic pain, dyspnea, hiccup, insanity, or are too old, too young, weak and emaciated. It is also recommended for those who are injured by fall and assault or exhausted by travel-related stress, vigil, anger, grief, and fear. By this, equilibrium of dhatus and strength is maintained, and kapha nourishes the body parts and ensures longevity. In the summer season, nights become shorter, and vata gets provoked in the body in adana kala (seasons of low body strength, such as summer and rains) due to absorption of fluid. Therefore, during this period daytime sleeping is advocated for all. [39-43]

#### *Consequences of improper daytime sleep*

ग्रीष्मवर्जयेषु कालेषु दिवास्वप्नात् प्रकुप्यतः| श्लेष्मपिते दिवास्वप्नस्तस्मातेषु न शस्यते||४४||  
मेदस्विनः स्नेहनित्याः श्लेष्मलाः श्लेष्मरोगिणः| दूषीविषार्ताश्च दिवा न शयीरन् कदाचन्||४५||  
हलीमकः शिरःशूलं स्तैमित्यं गुरुगात्रता| अङ्गमर्दोऽग्निनाशश्च प्रलेपो हृदयस्य च||४६||  
शोफारोचकहृल्लासपीनसार्थवभेदकाः| कोठारुःपिडकाः कण्ठस्तन्द्रा कासो गलामयाः||४७||  
स्मृतिबुद्धिप्रमोहश्च संरोधः स्रोतसां ज्वरः| इन्द्रियाणामसामर्थ्यं विषवेगप्रवर्त(र्ध)नम्||४८||  
अवेन्नृणां दिवास्वप्नस्याहितस्य निषेवणात् तस्माद्धिताहितं स्वप्नं बुद्ध्वा स्वप्यात् सुखं बुधः||४९||  
grīṣmavarjyēṣu kālēṣu divāsvapnāt prakupyataḥ| ślēṣmapittē divāsvapnastasmāttēṣu  
na śasyatē||44||

mēdasvinah snēhanityāḥ ślēṣmalāḥ ślēṣmarōgiṇāḥ dūṣīviśārtāśca divā na śayīraṇ  
kadācanā||45||

halīmakaḥ śirahśūlaṁ staimityam gurugātratā| aṅgamardō’gnināśaśca pralēpō  
hṛdayasya ca||46||

śōphārōcakahṝllāsapīnasārdhāvabhēdakāḥ| kōṭhāruhpiḍakāḥ kaṇḍūstandrā kāsō  
galāmayāḥ||47||

smṛtibuddhipramōhaśca samrōdhah srōtasām jvarah| indriyāṇāmasāmarthyam  
viśavēgapravarta(rdha)nam||48||

bhavēnnṝnām divāsvpnasyāhitasya niśēvanāt| tasmāddhitāhitam svapnam buddhvā  
svapyāt sukham budhah||49||

grIshmavarjyeShu kAleShu divAsvapnAt prakupyataH| shleShmapitte  
divAsvapnastasmAtteShu na shasyate||44||

medasvinaH snehanityAH shleShmalAH shleShmarogiNaH| dUShlviShArtAshca divA  
na shaylran kadAcana||45||

hallmakaH shiraHshUlaM staimityaM gurugAtratA| a<sub>ggamardo</sub>agninAshashca pralepo  
hRudayasya ca||46||

shophArocakahRullAsapInasArdhAvabhedakAH| koThAruHpiDakAH kaNDUstandrA  
kAso galAmayAH||47||

smRutibuddhipramohashca saMrodaH srotasAM jvaraH| indriyANAmasAmarthyam  
viShavegapravarta(rdha)nam||48||

bhavennRuNAM divAsvapnasyAhitasya niShevaNAt| tasmAddhitAhitaM svapnaM  
buddhvA svapyAt sukhaM budhaH||49||

Sleeping during daytime is contraindicated in the seasons other than summer because it causes vitiation of kapha and pitta. Persons having excessive fat, those who are addicted to fatty substances, having plenty of kapha, suffering from vitiated kapha related disorders, and those afflicted by latent poisons should never sleep during daytime. If one violated the given advice of sleeping during the day, he would subject himself to *halimaka* (advance stage of jaundice), headache, cold, heaviness of body parts, malaise, loss of digestive power, *hridyopalepa* (a feeling as if phlegm adhered to the heart), edema, anorexia, nausea, rhinitis, hemicranias, urticarial patches, pustules, boils, itching, drowsiness, coughing, disorders of the throat, impairment of memory and intelligence, obstruction of the body channels, fever, incapability of sensory and motor systems and enhancement of the toxic effects of poisons. So, one should keep in view the merits and demerits of sleep in various seasons and situations to stay happy and live long [44-49]

#### *Qualities of day and night sleep*

रात्रौ जागरणं रुक्षं स्निग्धं प्रस्वपनं दिवा| अरुक्षमनभिष्यन्दि त्वासीनप्रचलायितम्||५०||

rātrau jāgaraṇaṁ rūkṣaṁ snigdhaṁ prasvapanaṁ divā| arūkṣamanabhiṣyandi  
tvāśīnapracalāyitam||50||

rAtrau jAgaraNaM rUkShaM snigdhaM prasvapanaM divA| arUkShamanabhiShyandi  
tvAsInapracalAyitam||50||

Insomnia or staying up late at night causes roughness in the body and sleeping during the day causes *snigdhata* (unctuousness). However, napping in sitting posture does not cause either roughness nor unctuousness [50]

#### *The importance of diet and sleep among the obese and the (excessively) lean*

देहवृत्तौ यथाऽहारस्तथा स्वप्नः सुखो मतः| स्वप्नाहारसमुत्थे च स्थौल्यकाश्ये विशेषतः||५१||

dēhavṛttau yathā”hārastathā svapnah sukhō mataḥ| svapnāhārasamutthē ca  
sthāulyakāśyē viśeṣataḥ||51||

dehavRuttau yathA<sub>a</sub>ahArastathA svapnaH sukho mataH| svapnAhArasamutthe ca  
sthauylakArshye visheShataH||51||

As wholesome diet is essential for the maintenance of the body, sleep is essential for happiness. Therefore, obesity and leanness are specifically caused by improper sleep and diet. [51]

### *Sleep-promoting measures*

अश्यङ्गोत्सादनं स्नानं ग्राम्यानूपौदका रसाः| शाल्यन्नं सदधि क्षीरं स्नेहो मद्यं मनःसुखम्||५२॥

मनसोऽनुगुणा गन्धाः शब्दाः संवाहनानि च चक्षुषोस्तर्पणं लेपः शिरसो वदनस्य च||५३॥

स्वास्तीर्णं शयनं वेशम् सुखं कालस्तथोचितः| आनयन्त्यचिरान्निद्रां प्रनष्टा या निमित्ततः||५४॥

abhyāngōtsādanāṁ snānāṁ grāmyānūpaudakā rasāḥ| śālyannāṁ sadadhi kṣīraṁ  
snēhō madyāṁ manaḥsukham||52||

manasō'nugunā gandhāḥ śabdāḥ saṁvāhanāni ca| cakṣuśōstarpaṇāṁ lēpāḥ śirasō  
vadanasya ca||53||

svāstīrṇāṁ śayanāṁ vēśma sukhaṁ kālastathōcitaḥ| ānayantyacirānnidrāṁ pranaṣṭā  
yā nimittataḥ||54||

abhyā~ggotsAdanaM snAnaM grAmyAnUpaudakA rasAH| shAlyannaM sadadhi  
kShIraM sneho madyaM manaHsukham||52||

manaso~anuguNA gandhAH shabdAH saMvAhanAni ca| cakShuShostarpaNaM lepaH  
shiraso vadanasya ca||53||

svAstIrnAM shayanaM veshma sukhaM kAlastathocitaH| AnayantyacirAnnidrAM  
pranaShTA yA nimittataH||54||

If for some reason one suffers from sleeplessness, he can be cured by applying measures such as- body massages, unction, bath, (intake of) soup made up of meat of domestic, marshy and/or aquatic animals, *shali* rice with curd, milk, fat, wine, mental pleasure, pleasant smell and sound, application of soothing ointment to eyes, head and face, comfortable bed and home, and getting habituated to sleeping at a particular time. [52-54]

### *Causes of insomnia*

कायस्य शिरसश्चैव विरेकश्छर्दनं भयम्| चिन्ता क्रोधस्तथा धूमो व्यायामो रक्तमोक्षणम्||५५॥

उपवासोऽसुखा शय्या सत्त्वोदार्यं तमोजयः| निद्राप्रसङ्गमहितं वारयन्ति समुत्थितम्||५६॥

एत एव च विज्ञेया निद्रानाशस्य हेतवः| कार्यं कालो विकारश्च प्रकृतिर्वियुरेव च||५७॥

kāyasya śirasaścaiva virēkaśchardanaṁ bhayam| cintā krōdhastathā dhūmō vyāyāmō  
raktamōkṣaṇam||55||

upavāsō'sukhā śayyā sattvaudāryam tamōjayah| nigrāprasaṅgamahitam vārayanti samutthitam||56||

ēta ēva ca vijñēyā nigrānāśasya hētavah| kāryam kālō vikāraśca prakṛtirvāyurēva ca||57||

kAyasya shirasashcaiva virekashchardanaM bhayam| cintA krodhastathA dhUmo vyAyAmo [1] raktamokShaNam||55||

upavAso~asukhA shayyA sattvaudAryaM tamojayaH| nigrAprasa~ggamahitaM vArayanti samutthitam||56||

eta eva ca vij~jeyA nigrAnAshasya [2] hetavaH| kAryaM kAlo vikArashca prakRutirvAyureva ca||57||

Elimination of dosha from the body and the head through purgation and emesis, predominance of *sattva* and suppression of *tamas*, emotions such as fear, anxiety, and anger, habits and activities such as smoking, physical exercise, bloodletting, fasting, and environmental settings such as uncomfortable bed go a long way in overcoming excessive sleepiness/hypersomnolence. The above-mentioned factors, along with overwork, old age, *vatika* diseases, *vatika* constitution and aggravation of vata itself, are known to cause sleeplessness even in a normal individual. Some are insomniac even by nature. [55-57]

#### *Origins and types of sleep*

तमोभवा श्लेष्मसमुद्भवा च मनःशरीरश्रमसम्भवा च| आगन्तुकी व्याध्यनुवर्तिनी च रात्रिस्वभावप्रभवा च निद्रा॥५८॥

tamōbhavā ślēṣmasamudbhavā ca manahśarīraśramasambhavā ca| āgantukī vyādhyanuvartinī ca rātrisvabhāvaprabhavā ca nigrā||58||

tamobhavA shleShmasamudbhavA ca manahsharIshramasambhavA ca| AgantukI vyAdhyanuvartInI ca rAtrisvabhAvaprabhavA ca nigrA||58||

Sleep is of seven types, categorized by its cause: *Tamas*, vitiated kapha, mental exertion, physical exertion, exogenous factors, diseases, and normal (nighttime). [58]

रात्रिस्वभावप्रभवा मता या तां भूतधार्तीं प्रवदन्ति तज्जाः| तमोभवामाहुरघस्य मूलं शेषाः पुनर्व्याधिषु निर्दिशन्ति॥५९॥

rātrisvabhāvaprabhavā matā yā tām bhūtadhātrīm pravadanti tajjñāḥ| tamōbhavāmāhuraghasya mūlam śeṣāḥ punarvyādhiṣu nirdiśanti||59||

rAtrisvabhAvaprabhavA matA yA tAM bhUtdhAtrIM pravadanti tajj~jAH| tamobhavAmAhuraghasya mUlaM sheShAH punarvyAdhiShu nirdishanti||59||

Natural sleep (sleeping at night) is the best form of sleep. This is also known as *Bhutadhatri*, or “that which nurses all the living beings.” The form of sleep that is caused

by *tamas* is the cause of all sinful acts while the remaining types are observed in specific situations and ailments [59]

## Summary

तत्र श्लोकाः-

निन्दिताः पुरुषास्तेषां यौ विशेषेण निन्दितौ। निन्दिते कारणं दोषास्तयोर्निन्दितभेषजम्॥६०॥

येभ्यो यदा हिता निद्रा येभ्यश्चाप्यहिता यदा। अतिनिद्रायानिद्राय भेषजं यद्भवा च सा॥६१॥

या या यथाप्रभावा च निद्रा तत् सर्वमत्रिजः। अष्टौनिन्दितसङ्ख्याते व्याजहार पुनर्वसुः॥६२॥

tatra ślōkāḥ- ninditāḥ puruṣāstēśāṁ yau viśēshēṇa ninditau| ninditē kāraṇāṁ dōṣāstayōrninditabhēṣajam||60||

yēbhyō yadā hitā nidrā yēbhyaścāpyahitā yadā| atinidrāyānidrāya bhēṣajarān yadbhavā ca sā||61||

yā yā yathāprabhāvā ca nidrā tat sarvamatrijaḥ| aṣṭauninditasaṅkhyātē vyājahāra punarvasuh||62||

tatra shlokAH- ninditAH puruShAsteShAM yau visheSheNa ninditau| nindite kAraNaM doShAstayorninditabheShajam||60||

yebhyo yadA hitA nidrA yebhyashcApyahitA yadA| atinidrAyAnidrAya [1] bheShajaM yadbhavA ca sA||61||

yA yA yathAprabhAvA ca nidrA tat sarvamatrijaH| aShTauninditasa~gkhyAte vyAjahAra punarvasuH||62||

Now, the summing up verses – Acharya Punarvasu (Lord Atreya), the son of Atri, has explained the contents in the chapter on “eight types of undesirable constitutions” as given below:

- Enumeration of undesirable constitutions.
- Two most undesirable types of persons.
- The causes of undesirability.
- Demerits of undesirable persons.
- Treatment of undesirable persons.
- Indications and contra-indications of sleep depend upon the nature of the individual and time.
- Causes and treatment of over-sleep and sleeplessness.
- Factors those are responsible for inducing good sleep.
- Types and effects of sleep [60-62]

## Tattva Vimarsha (Fundamental Principles)

- Eight types of the undesirable appearance of humans are: too tall, too short, too hairy, hairless, too dark, too light (complexioned), too obese and too lean. Too obese and too lean are the most undesirable of human appearances that are also more prone to various diseases. [3]
- Excessive obesity has eight inherent defects viz. decrease in longevity, hampered mobility, difficulty in sexual intercourse, debility, bad body odor, profuse sweating, excessive hunger, and excessive thirst. [4]
- Excessive obesity is caused by over-nourishment due to the intake of heavy, sweet, cold and fatty diet, lack of physical exercise, abstinence from sexual intercourse, indulgence in the day sleeping, uninterrupted cheerfulness, lack of mental activities and hereditary/genetic defects. [4]
- Obesity is a result of obstruction of channels by excess accumulated meda dhatu (fat). This deranges the movement of vata which is specially confined to *koshtha* (abdominal viscera) resulting in the stimulation and hastening of the digestive process through abnormally increased *agni* (pitta). This leads to excessive hunger and thirst and the person eats more food to gain weight. An excessive increase in adipose tissue and vitiation of tridosha causes severe diseases in obese people. [5-8]
- Disproportionate increase of fat occurs mainly around buttocks, abdomen, and breasts, which become pendulous and the person suffers from improper metabolism and energy. [9]
- Indulgence in dry (non-unctuous) diets and drinks, fasting, inadequate diet, overuse of therapeutic purificatory measures, grief, suppression of natural urges, sleep deprivation, dry powder massage, indulgence in baths, heredity, old age, continued illness and anger make a person too lean. [11-12]
- Too lean and too obese persons are prone to suffering from various diseases and need constant treatment. [16]
- Being lean is better than being obese because the lean person responds well to nourishing treatment and balancing of the causative dosha (vata and pitta). On the contrary, reducing therapy and drugs used in the treatment of obesity can cause an increase in *agni*, which may cause increased appetite and thirst. Hence, the obese suffer more than the lean. [17]
- A person possessing a balanced constitution of muscles and compactness of the body, and stable sense organs does not fall prey to diseases. He can tolerate hunger, thirst, heat and cold, and physical strain better. His digestion, assimilation of food and muscle metabolism are in a state of equilibrium. [18-19]
- The food that is heavy to digest but not having any fattening (such as high fiber diet) is prescribed for the obese. In lean persons, food that is light to digest and has high nourishing value is prescribed. [20]
- Food and drinks that alleviate vata and reduce kapha and meda dhatu, as well as therapies such as enema (administered with drugs of sharply acting, dry and hot

properties) and therapeutic powder massages are important treatments for obesity. [21-22]

- To enhance body mass of the excessively lean, an easy-to-digest and nourishing diet therapy, proper sleep, mind relaxing activities, *rasayanas* and aphrodisiacs, a diet with unctuous food and newly harvested food, and measures that eliminate vitiated dosha are prescribed. [29-34]
- Tiredness, inactivity of mind, and detachment from sense organs are certain situations and conditions that help in falling asleep. [35]
- Normal sleep is necessary for the normal functioning of human body and excessive or inadequate sleep results in many diseases. Happiness and misery, nourishment and emaciation, strength and weakness, fertility and infertility, knowledge and ignorance and life and death depend on proper and improper sleep. [36]
- Sleeping during the day is indicated for restoring any damage to the physical constitution or depletion of body tissues. In a normal person, sleeping during the day is contraindicated in seasons other than summer because it causes vitiation of kapha and pitta. Daytime sleep causes serious health problems. While insomnia causes roughness in the body, daytime sleep causes *snigdhata* (unctuousness) in the body. [39-50]
- Obesity and leanness are caused by improper diet and sleep. [51]

## Vidhi Vimarsha(Applied Inferences)

In biomedical science, the above-described eight types of undesirable persons are comparable to a variety of genetic and neuroendocrine disorders. Out of these eight types, the last two (*atisthula* and *atikrishna*) need therapeutic interventions and deserve special attention. According to Chakrapani, physical deformities such as *kubja* (hunchback) and *pangu* (limp gait) may also be taken as undesirable.

### Morbid obesity

In the context of *atisthula* and *atikrishna*, Charak has explored these conditions from the standpoint of their diathesis, clinical presentation, and management, which is comparable to approaches taken today to the study of obesity and leanness. Suśruta has considered rasa dhatu as the main culprit for both obesity and emaciation (*rasa nimittameva sthauiyam karshyam ca*)<sup>12</sup>.

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<sup>12</sup> Chandola HM, Bhatia S. Concept of Diabetes mellitus in Ayurveda and its treatment with certain indigenous drugs. AYU Int 2001;1:84-87.

Lipid precursors are acted upon by fat-specific energy (*medhodhatvagni*) for their conversion into adipose tissue (meda dhātu)<sup>13</sup>. Vitiation of kapha dosha and excessive accumulation of fat-specific energy and waste products of adipose tissues (*kleda*) lead to dysfunction of adipose tissues. Adipose channels have two origins - kidney, adrenal and fat around them and other are visceral and omental fat (*vapavahana*)<sup>14</sup>. These channels draw nutrition, including lipid from the antecedent flesh and transient lipid and then convert them into a stored form of lipid. As per biomedical science, obesity is associated with increased adipose stores in the subcutaneous tissues, skeletal muscles and internal organs such as kidney, heart, liver and omentum. Adipose tissues (meda dhātu) form a crucial link to the concept of tissue metabolism. Low levels of fat-specific energy (*medodhatvagni*), despite a normal food intake, can lead to a steady accumulation of fat and the outcome is obesity<sup>15 16</sup>. The conventional system of medicine has given due consideration to certain factors such as insufficient sleep, genetic predisposition, later age pregnancy, certain medications and other epigenetic factors in the etiopathogenesis of obesity and its related disorders<sup>17</sup>. (Verse 3-4)

### Increased desire to eat among the obese

Charak correlated an increased desire to eat with increased agni in the morbidly obese. Recent evidence suggests that leptin and ghrelin had shown their influence on appetite. In this context, ghrelin is produced from the stomach, and leptin is produced by the adipose tissue of fat storage reserves in the body, which is responsible for short-term and long-term appetite control respectively in the body.<sup>18</sup> In the brain melanocortin

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<sup>13</sup> Tripathi SN, Chandola HM. Study on variations in diabetes mellitus (Prameha) with special reference to plasma insulin, cortisol and catecholamines. In Bajaj JS, ed. Diabetes mellitus in Developing Countries. New Delhi, India: Interprint, 1984:125-128.

<sup>14</sup> Sharma H, Chandola HM..Prameha in Ayurveda: Correlation with Obesity, Metabolic Syndrome, and Diabetes Mellitus.Part 1-Etiology, Classification, and Pathogenesis. The Journal of Alternative and Complementary Medicine.2011. 17(6):491-496.

<sup>15</sup> Kajaria Divya, Chandola H.M. Dislipidemia Cause or Consequence of Diabetes-Reanalyzing the pathogenesis with the vision of Ayurveda. Journal of Diabetes and Health, Photon. 2014.

<sup>16</sup> Pandey Rashmi, Dubey N., Tripathi NS. Ayurvedic Concept of Lifestyle Ailments and its Healing Through Traditional Regimen., 2015, Scholars Journal of Applied Medical Sciences, 3(3H):1599-1601

<sup>17</sup> Kumar Manish, Kividassanavar MB et al. Screening of Serum Insulin in Obese Individual WSR to Sthaulya: An Observational Study. 2016. European Journal of Pharmaceutical and Medical Research, 2016,3(9),638-640

<sup>18</sup> extracts from [http://www.jbsoweb.com/admin/php/uploads/215\\_pdf.pdf](http://www.jbsoweb.com/admin/php/uploads/215_pdf.pdf)

pathway has drawn the attention of research scholars that this pathway has a specific role in stimulating appetite, which is located in the area of the lateral and ventromedial hypothalamus and arcuate nucleus. These areas are directly related to the feeding and satiety centers.<sup>19</sup>

There are two distinct groups of neurons in the arcuate nucleus viz- The first group contains neuropeptide Y (NPY) and agouti-related peptide (AgRP) and the second group contains Pro-opiomelanocortin (POMC) and cocaine and amphetamine regulated transcript (CART). The first group of neuron i.e. NPY/AgRP exerts stimulatory inputs to the LH while inhibitory inputs to the VMH, which stimulate feeding and inhibit satiety respectively. Both groups of arcuate nucleus neurons are under the regulation of leptin, which inhibits the NPY/AgRP group of neurons and stimulates the POMC/CART group of neurons. Hence, the leptin deficiency or leptin resistance leads to develop overfeeding tendency, which is caused by some genetic and acquired forms of obesity.<sup>20, 21</sup> These findings suggest the genetic inputs in overweight and obesity, which is quite comparable to the Ayurvedic lexicons.[verse 4]

### Consequences of obesity

Serious diseases are the outcome of excessive obesity due obstruction of body channels by the meda dhatu. This indicates ancient wisdom of Ayurveda scientists, which is comparable to the impact of obesity on health perspectives of biomedical science<sup>22</sup>. We have yet to understand what they had foreseen in reference to fat accumulation around the kidneys. Decreased life span is stated to be an important consequence of obesity in Ayurveda. According to contemporary science, metabolic and psychological pathologies are often present together and are associated with dysregulation of the hypothalamic-pituitary-adrenal axis<sup>23</sup>. Affect disorders are also reported among obese binge eaters. The National Institute of Health, USA has issued an alert labeling obesity a “Killer disease” due to its health-related consequences such as coronary disease, diabetes mellitus, hypertension, hyperlipidemia, kidney disorders, gallbladder disorders, cancer of colon, pancreas, breast, uterus, kidney and gallbladder, osteoarthritis, menstrual irregularities in females, cryptogenic cirrhosis of the liver and

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<sup>19</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>20</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>21</sup> May, RC et al. 1996. Glucocorticoids and acidosis stimulate protein and amino acid catabolism in vivo. *Kidney Int.* 1996 Mar;49(3):679-83.

<sup>22</sup> Vaudevan et al. 2011. Textbook of biochemistry for medical students, Sixth Edition, JP Medical Publishers

<sup>23</sup> Parfitt A. 1982 The coupling of bone formation to bone resorption: a critical analysis of the concept and of its relevance to the pathogenesis of osteoporosis. *Metab Bone Dis Relat Res* 4:1–6.

hepatocellular carcinoma, insulin resistance, and physiological hyperinsulinemia. Some of the social consequences of obesity could include divorces, due in part to reduce sexual activities between partners. Besides there, transitional physiological phases such as weight gain during adolescence in boys and girls, post-natal weight gain in women, and peri-post menopausal obesity are frequently noted in clinical settings that warrant special care and management<sup>24 25 26 27 28 29 30</sup>. [verse 5-8]

### Etiology, features, and consequences of atikrisha (emaciation)

The etiological factors for atikrisha may be divided into two groups - excessive expenditure of calories and fewer intakes of calories. Either of these conditions leads to under-nutrition which ultimately results in atikrisha. In the pathogenesis of emaciation (karshya) , vata dosha plays an important role. Most of the etiological factors observed in the case provoke vata dosha vitiation.

In sthaulya there is excessive formation and under-utilization (due to sedentary habit) of the rasa dhatu. On the other hand, in krishata there is less formation of rasa dhatu due to diseases or due to undernourishment. Further, Charak and Sushruta both have categorized *krishata* as a *rasa pradoshaja vyadhi*. [Cha.Sa.Sutra Sthana28/10], [Su.Sa.Sutra Sthana 15/37]<sup>31</sup>,[Su.Sa.Sutra Sthana 24/8]<sup>32</sup> In this way, *rasa dhatu dushti*

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<sup>24</sup> Mundy G 1989 Local factors in bone remodeling. Rec Prog Horm Res 45:507–531.

<sup>25</sup> Hayward M, Fiedler-Nagy C 1987 Mechanisms of bone loss: rheumatoid arthritis, periodontal disease and osteoporosis. 22:251–254.

<sup>26</sup> Tuominen J, Impivaara O, Puukka P, Ronnenmaa T 1999 Bone mineral density in patients with type 1 and type 2 diabetes. Diabetes Care 22:1196–1200.

<sup>27</sup> Krakauer J, McKenna M, Burderer N, Rao D, Whitehouse F, Parfitt A 1995 Bone loss and bone turnover in diabetes. Diabetes 44:775–782.

<sup>28</sup> Macey L, Kana SM, Jingushi S, Terek RM, Borretos J, Bolander ME 1989 Defects of early fracture-healing in experimental diabetes. J Bone Joint Surg Am 71:722–733.

<sup>29</sup> Gebauer G, Lin S, Beam H, Vieira P, Parsons J 2002 Low-intensity pulsed ultrasound increases the fracture callus strength in diabetic BB Wistar rats but does not affect cellular proliferation. J Orthop Res 20:587–592.

<sup>30</sup> Barrett-Conner E, Holbrook T 1992 Sex differences in osteoporosis in older adults with non-insulin-dependent diabetes mellitus. JAMA 268:3333–3337.

<sup>31</sup> Loe H 1993 Periodontal disease. The sixth complication of diabetes mellitus. Diabetes Care 16:329–334.

<sup>32</sup> Nelson R, Shlossman M, Budding L, Pettitt DJ, Saad MF, Genco RJ, Knowler WC1990 Periodontal disease and NIDDM in Pima Indians. Diabetes Care 13:836–840.

mainly in the form of *kshaya* is found in extremely lean or emaciated people. The other *dhatu* involved in the pathogenesis of obesity as well as atikrisha is meda *dhatu* since it is mentioned that *medokshaya* (or the deficiency of meda *dhatu*) cause *krisanga*. [A.H.Sutra Sthana 11/18]<sup>33</sup>

In biomedical terms, emaciation is the outcome of loss of the fatty contents or loss of adipose tissue component of subcutaneous fat, which is lying beneath the outer covering of the body<sup>34</sup>. It is also known as extreme weight loss, leanness, or thinness. In general term, it is also known as wasting, which is caused by hampered nutritional requirement at the tissue level and excessive starvation. Wasting or leanness is an important symptom of improper nourishment, which is commonly seen in various clinical conditions such as poverty, a variety of gastrointestinal disorders, various eating disorders, prolonged fever, malignant diseases, endocrine disorders, chronic infections, autoimmune disorders as well as parasitic infections. The malnourished person faced a lot of problems related to cardiovascular, integumentary and urogenital systems. Disturbances in blood circulation, serum electrolyte, and serum protein are commonly observed in emaciated person. Such type individuals are more to suffer from infections due to deranged immune power and swelling in general<sup>35</sup>. Obesity and leanness can manifest themselves in very severe and excessive forms than discussed here and those cases could make the management of such disorders - and any disease it could lead to – very challenging. While the principles of treatment remain unchanged, the therapeutic measures should be suitably intensified to counter the numerous disorders that arise because of excessive obesity and leanness [Cha.Sa. Sutra Sthana 23/3-34]. The patients of atikrisha and sthaulya perpetually suffer from diseases but the standpoint of treatment, the former is significantly more manageable because sthula (or the obese) suffers more in comparison to atikrisha (the emaciated) [Su. Sa. Sutra Sthana 15/42].<sup>36</sup> Further, it is mentioned that atikrisha is a grave disease, but is considered better than atisthula from treatment aspect because there is no treatment for sthaulya. For proper treatment of sthaulya the drugs must have *medohara*, *agnihara* and *vatahara* action at the same time, which is neither possible from karshaṇa nor brimhana. Recent evidence

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<sup>33</sup> <https://www.slideshare.net/sprince33/glomerulonephritis> accessed on 12 June 2017

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<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

<sup>35</sup>

<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

<sup>36</sup> Hampton T. Studies probe oral health diabetes link. JAMA 2008; 300:2471-2473.

also suggests that Charak had associated extreme weight-loss/undernourishment with high rates of morbidity and mortality, although to a lesser extent than obesity.<sup>37 38 39 40 41</sup>

## Management of the Morbidly Obese

In the conventional system of medicine, the main treatment for obesity consists of diet and physical exercise for short-term weight control. Maintaining the weight by short-term dietary control is very difficult to an obese person, and it required guided exercise and low calorie diet in their daily regimens. Because lack of physical exercise is the key factor and imparts a role in the diathesis of obesity. The lack of physical activities also plays an important role in obesity-associated with the involvement of brain and abdominal. Regarding physical exercise, it not only reduces body weight but also counteract metabolic adaptation but regulating nutritional balance set point.<sup>64</sup> It is presumed that physical inactivity contributes to both visceral adiposity and cerebellar brain changes because in the area of cerebellar cortex and hippocampal dentate gyrus of brain show enhanced synaptogenesis and neurogenesis in response to physical exercise training.<sup>42 43 44</sup>

In this context, Ayurveda has laid down a strong emphasis on drugs, dietary and lifestyle interventions for the management of atisthaulya. Therefore, factors such as *madhura*, *sheeta*, *snigdha*, *guru*, *picchila* and lifestyle errors are to be avoided in such cases. *Ruksha udvartanas* are advocated obese patients as an external purificatory measure, while *vamana*, *virechana*, and *asthapana basti* as internal bio-purificatory

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<sup>37</sup> <http://press.endocrine.org/doi/10.1210/jcem.86.3.7304> accessed on 12 June 2017

<sup>38</sup> Goldberg J.Ira . Diabetic Dyslipidemia: Causes and Consequences .The Journal of Clinical Endocrinology & Metabolism. 2001. 86 (3): 965-971.

<sup>39</sup>

[http://doctor.ndtv.com/faq/ndtv/fid/8091/What\\_is\\_the\\_cause\\_for\\_white\\_cloudy\\_urine.html](http://doctor.ndtv.com/faq/ndtv/fid/8091/What_is_the_cause_for_white_cloudy_urine.html) accessed on 12 June 2016

<sup>40</sup> <http://ehealthforum.com/health/topic35228.html> accessed on 12 June 2016

<sup>41</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

<sup>42</sup> <https://answers.yahoo.com/question/index?qid=20100106090425AACh3og> accessed on 12 June 2016

<sup>43</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

<sup>44</sup> Zargar BA, Masoodi MH, Ahmed B, Ganie SA. Phytoconstituents and therapeutic uses of Rheum emodi wall. ex Meissn. Food Chem. 2011;128(3):585-589.  
doi:10.1016/j.foodchem.2011.03.083

measures. If an *atisthula* person possesses good stamina and strength, they should be treated with vamana and virechana therapies. Non-unctuous, warm and strong enema are advocated such type of patients.<sup>45 46 47 48</sup> *Yogic* practices have a significant impact on the physical, mental, emotional and spiritual health of the individual. It is reported that a significant improvement in the levels of BP, LDL cholesterol, and BMI can be noted after three months of residential therapy consisting of vegetarian diet and *kriya yoga*. A randomized controlled study reveals that practicing *yoga* for a year brought about significant improvement in body weight and body density. Regular practice of *yoga* has shown to improve the serum lipid profile in patients (with known IHD) as well as in healthy subjects. A regular regimen of *pranayama* reduces stress hormone and levels of endorphin and enkephalin, consequently increasing the level of HDL while decreasing the level of LDL, VLDL and TGs.<sup>49 50 51 52</sup>

Recent evidence suggests that some *ayurvedic* herbal drugs are found to be very effective in normalizing deranged lipid profiles, reducing BMI and slowing down the risk heart diseases. Ayurvedic drugs such as *rasona* (*Allium cepa*), *guggulu* (*Commiphora mukul*), *puṣhkaramula* (*Inula racemosa*), *arjuna* (*Terminalia Arjuna*), *dhānyaka* (*Coriandrum sativum*), *nishamalaki churṇa* (powder of *Emblica officinalis* and *Curcuma longa*), *haritaki* (*Terminalia chebula*), *haridra* (*Curcuma longa*), *bilva* (*Aegle marmelos*), *tejapatra* (*Cinnamomum tamala*), *vrikshamla* (*Garcinia cambogia*) and Ayurvedic formulations such as- *triphalā guggulu*, *medohara guggulu*, *amṛitadi guggulu*,

<sup>45</sup> Sodini I, Morin P, Olabi A, Jiménez-Flores R. Compositional and functional properties of buttermilk: a comparison between sweet, sour, and whey buttermilk. J Dairy Sci. 2006 Feb;89(2):525-36. doi: 10.3168/jds.S0022-0302(06)72115-4. PMID: 16428621.

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<sup>47</sup> Rajsmita B, Keshavamurthy V. Re-discovering Sandalwood: Beyond Beauty and Fragrance. Indian Dermatol Online J. 2019;10(3):296-297.  
[doi:10.4103/idoj.IDOJ\\_357\\_18](https://doi.org/10.4103/idoj.IDOJ_357_18)

<sup>48</sup> Shah G, Shri R, Panchal V, Sharma N, Singh B, Mann AS. Scientific basis for the therapeutic use of *Cymbopogon citratus*, staph (Lemon grass). J Adv Pharm Technol Res. 2011;2(1):3-8. [doi:10.4103/2231-4040.79796](https://doi.org/10.4103/2231-4040.79796)

<sup>49</sup> Pastorino G, Cornara L, Soares S, Rodrigues F, Oliveira MBPP. Liquorice (*Glycyrrhiza glabra*): A phytochemical and pharmacological review. Phytother Res. 2018;32(12):2323-2339. [doi:10.1002/ptr.6178](https://doi.org/10.1002/ptr.6178)

<sup>50</sup> Chakrapanidatta, Cakradatta (*Chikitsasangraha*). Edited by Priya Vrat Sharma. 3rd ed. Varanasi: Chaukhamba publishers; 2002

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<sup>52</sup> Li M, Qu W, Chu S, et al. Effect of the decoction of *Tribulus terrestris* on mice gluconeogenesis. Zhong Yao Cai. 2001;24:586-588.

*arogavardhani vati* etc. are also found to be effective in weight reduction as well as

relief in other signs and symptoms.<sup>53 54 5556 57 58 59 60 61 62 63 64 65 66</sup> The herbs listed in the

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<sup>53</sup> Arcasoy HB, Erenmemisoglu A, Tekol Y, et al. Effect of Tribulus terrestris L. saponin mixture on some smooth muscle preparations: a preliminary study. *Boll Chim Farm.* 1998;137:473-475.

<sup>54</sup> Sangeeta D, Sidhu H, Thind SK, et al. Effect of Tribulus terrestris on oxalate metabolism in rats. *J Ethnopharmacol.* 1994;44:61-66.

<sup>55</sup> Jarald, E., Joshi, SB.,and Jain, DC., (2009). Studies shows that Myricetin, Quercetin and Catechin-gallate inhibit insulin stimulated glucose transporters in isolated adipocytes of rats (Strobel, P., Allard, C., Perez-Acle, T., Calderon, R., Aldunate, R., and Leighton, F., 2005)

<sup>56</sup> A review on Acacia catechu Willd Muhammad Anis Hashmat, Rabia Hussain *Interdisciplinary journal of contemporary research in business* may 2013 vol 5, no 1

<sup>57</sup> Wickenberg J, Ingemannsson S, Hlebowicz J (2010) Effects of Curcuma longa (turmeric) on postprandial plasma glucose and insulin in healthy subjects. *Nutr J* 9: 43

<sup>58</sup> Rai PK, Jaiswal D, Mehta S, Rai DK, Sharma B, et al. (2010) Effect of curcuma longa freeze dried rhizome powder with milk in stz Induced diabetic rats. *Indian J Clin Biochem* 25: 175-181

<sup>59</sup> Ponnusamy S, Ravindran R, Zinjarde S, Bhargava S, Ameeta R (2011) Evaluation of Traditional Indian Antidiabetic Medicinal Plants for Human Pancreatic Amylase Inhibitory Effect In Vitro Evidence-Based.Complementary and Alternative Medicine 10.

<sup>60</sup> Binic I, Lazarevic V, Ljubenovic M, Mojsa J, Sokolovic D (2013) Skin Ageing: Natural Weapons and Strategies. *Evid Based Complement Alternat Med.*

<sup>61</sup> Chattopadhyay R.R., Chattopadhyay R.N., Nandy A.K., Poddar G., Maitra S.K. Preliminary report on antihyperglycemic effect of fraction of fresh leaves of Azadiracta indica (Beng neem) *Bull. Calcutta. Sch. Trop. Med.* 1987;35:29–33.

<sup>62</sup> Biswas K., Chattopadhyay I., Banerjee R.K., Bandyopadhyay U. Biological activities and medicinal properties of neem (Azadiracta indica) *Curr. Sci.* 2002;82:1336–1345.

<sup>63</sup> Subash Babu P, Prabuseenivasan S, Ignacimuthu S. *Phytomedicine*, 2007;14:15–22

<sup>64</sup> Matan N, Rimkeeree H, Mawson A J, Chompreeda P et al. *International Journal of Food Microbiology*, 2006;107:180–185

<sup>65</sup> Study of kustha (, clarke) in ischaemic heart disease *Anc Sci Lifev.*13(1-2); Jul-Dec 93PMC3336543

<sup>66</sup> Thorburn, A., Muir, J., and Proietto, J. Carbohydrate fermentation decreases hepatic glucose output in healthy subjects. *Metabolism*1993;42(6):780-785. 8510524

treatment of obesity have multifarious pharmacological properties. Some research studies confirmed both hypolipidemic and hypoglycemic activities. The herbs that possess properties like pungent (katu), bitter (tikta), astringent (kashaya) tastes, hot potency (ushna virya), light to digest (laghu) and producing dryness (ruksha) are responsible for depletion of meda (medohara) and removing toxins (lekhaneeyaa)activities.<sup>67</sup> [verse 20-28]

### Management of the emaciated/too lean

Too lean patients are brought to good health through renourishment or reintroducing nourishing liquids and food to the body and check the process of catabolism. It starts with a glass of water followed by mixed with lemon and table salt and finally reach to juices, which is made up of vegetable, pulses, rice mixed with pepper, lemon juice and table salt. Later on, it is replaced with cow milk, soups of pulses and vegetable mixed with butter and salt. If the emaciated status is improved, try to introduced small amount of solid food in meals at the frequent interval and try to avoid a large amount of solid food at a time. The dietary regimen is to be focused on proteins, fats, carbohydrates, multi-vitamin and mineral for the management of the emaciated person. It is always kept in mind at the time of management of the too lean person, excessive fatty foods items and excess fiber dominated grains and vegetable are to be avoided because they are deficient in energy and consume too much time for digestion. Treatment of emaciation also includes prescribing a lot of sleep, rest, relaxation, and counseling. In the present context, rasa dhatu means body fluid which is responsible for the nourishment of entire body and mind. Impairment of circulation of body fluid results in diseases and decay. Rasa should be available in adequate quantity and quality for it to circulate through the cells of the body, providing the requisite nourishment they need for proper functioning.[verse 29-34]

### Concept of Sleep

The age-old concepts of sleep (nidra) and its different stages such as *jagrata*, *swapana* and *sushupti* are comparable to the current concept of sleep and its stages. The problems and pattern of sleep are assessed by observing the activity of brain through Electroencephalogram (EEG) pattern.<sup>68</sup> It is pointed out that wakefulness and stages of sleep have a specific EEG pattern. The wakefulness is associated with Beta and Gama waves frequencies in EEG pattern, which depends on pleasurable or painful stressors

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<sup>67</sup> Sarkisyan RG. Effect of Ferula on arterial pressure. Meditsinskii Zhurnal Uzbekistana.1969;1969:23–4. Sambaiah K, Srinivasan K. Influence of spices and spice principles on hepatic mixed function oxygenase system in rats. Indian J Biochem Biophys. 1989;26:254–8. [PubMed]

<sup>68</sup> Sambaiah K, Srinivasan K. Influence of spices and spice principles on hepatic mixed function oxygenase system in rats. Indian J Biochem Biophys. 1989;26:254–8. [PubMed]

of surrounding environment. Stage 1 non-rapid eye movement (NREM) sleep is characterized by slowing down of Beta and Gamma wave frequencies, reached to slow down the Alpha wave, and finally reached to Theta wave frequencies in EEG pattern. At a higher stage of NREM and REM, these brain wave frequencies in EEG pattern gradually decreases, and the person falls into sleep. By observing overall brain activity in EEG pattern, we can say that frequencies of sleep waves are low in wakefulness and it is gradual increases in different stages of sleep. Sleep spindles and K-complexes appeared in EEG pattern in Stage 2 of sleep, while more sleep spindles are observed in Stage 3 of sleep. The slow wave sleep is also known as high amplitude Delta wave, which is commonly observed in Stages 3 and 4 of sleep in EEG pattern. Low amplitude, mixed frequency waves- a sawtooth wave in EEG pattern observed at REM stage of sleep.<sup>69 70 71</sup>[verse 35]

### *Sleep regulation*

It is presumed that the sleep physiology is controlled by the hypothalamus and the suprachiasmatic nucleus (SCN) in the brain, which regulates mechanism of homeostatic and circadian rhythm respectively of the body. The actual mechanism of the physiology of sleep is still evolving in biomedical sciences. The sleep is initiated and begins by projections from the SCN to the brain stem. Borbely called projections as Process S (homeostatic) and Process C (Circadian) respectively, who first proposed these two process models in 1982. He pointed out that maximum sleep is the outcome of significant differences between homeostatic and circadian rhythm.<sup>72</sup>[verse 39-43]

### *Effects of sleep*

Recent conventional evidence suggests that seasonal variation can have an impact on sleep/wake cycle, which is quite interesting and proven the age-old concept of Ayurveda. Recent evidence shows that core temperature of body and secretion of melatonin hormone levels are slightly greater in the month of summer due to prolong the length of light exposure, which imparts significant role in daytime sleep in summer.

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<sup>69</sup> Atal ck.Chemistry and pharmacology of vasicine.Indian drugs 1980 15(2) 15-18

<sup>70</sup> Bairwa Ranjan, Singhal Manmohan, Sodha Ravindra Singh and Rajawat Balwant Singh (2011). Medicinal Uses of Trachyspermum Ammi: A Review, The Pharma Research, 5(2): 247-258

<sup>71</sup> Nagaratna, A Clinico-Experimental Study of Two Sources of Pashanabhesha and Bryophyllum Pinnatum with respect to Moortala Karma, 2012. Rajiv Gandhi University of Health Sciences, Bangalore

<sup>72</sup> Youshikawa M, Nishida N, Shimoda H, Takada M, Kawahara Y, Matsuda. Polyphenol constituents from Salacia species: quantitative analysis of mangiferin with alpha-glucosidase and aldose reductase inhibitory activities. Yakugaku Zasshi, 1231, 2001, 371-378.

This is the reason people go to bed early at night and wake up early in the morning in the month of summer. Sunlight exposure in the morning hours may affect internal biological clock, shifting the timing of the sleep window. The need and function of sleep are the most lacking areas of sleep research in biomedical sciences. Some of the important ones are- restoration and recovery of body systems, energy conservation, memory consolidation, protection from predation, brain development, and discharge of emotions.<sup>73 74 75 76</sup>[verse 36-38 and 44-49]

### *Sleep about atisthula and atikrisha*

Recent evidence suggests that a good sleep plays an important role in the regulation of neuroendocrine, hormonal and metabolic function in the body. Since last few decades, the timing and quality of sleep is gradually hampered due to the affliction of modernization in many ways. At present, the adult and children progressively reduce bedtimes and increases times for other activities, which affect the metabolic functions in many ways. The atisthula and atikrisha are also the outcome of excessive sleep and lack of sleep and vice-versa. Evidence shows that sleep loss for prolong period may provoke the risk of weight gain and morbid obesity. Further, sleep reduction in young adults affects metabolic and endocrine functions in various ways such as- insulin resistance, hyperglycemia, elevated sympathovagal activity, an elevated level of serum glucocorticoid hormone, increased levels of ghrelin, and decreased the level of leptin. Due to improper and lack of good quality of sleep in adolescents may be important factors to consider in the prevention of childhood obesity.<sup>77</sup> Probably this is the reason that sleep is mentioned in the present chapter by Charak about atisthula and atikrisha like other dietary and lifestyle intervention.[verse 51]

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<sup>73</sup> Effect of an indigenous herbal compound preparation ‘Trikatu’ on the lipid profiles of atherogenic diet and standard diet fed Rattus norvegicus Valsala Sivakumar1, Phytotherapy Research Volume 18, Issue 12, pages 976–981, December 2004.

<sup>74</sup> Trikatu, an herbal compound as immunomodulatory and anti-inflammatory agent in the treatment of rheumatoid arthritis-an experimental study Vachana Murunikkara, MahaboobKhan RasoolCellular Immunology Available online 18 December 2013

<sup>75</sup> Effect of trikatu (PIPERINE) on the pharmacokinetic profile of isoniazid in rabbits RS Karan, VK Bhargava, SK Garg Year : 1998 , Volume : 30 , Issue : 4 , Page : 254-256.

<sup>76</sup> Effect of Ethanolic Extract of Embelia ribes on Dyslipidemia in Diabetic Rats Uma Bhandari, Raman Kanojia, and K. K. Pillai Int. Jnl. Experimental Diab. Res., 3:159–162, 2002

<sup>77</sup> Anti-inflammatory effects and immunomodulatory mechanism of aquilaria agallocha Y.-c. Mao<sup>1</sup> , h.-y. Hsu<sup>2</sup>, y.-h. Chiu<sup>2</sup> department of laboratory medicine and biotechnology, department of life science, tzu chi university, hualien, taiwan

### *Insomnia or sleeplessness*

*Anidra* of Ayurveda is closely related to Insomnia, or sleeplessness of biomedical sciences. It is a disorder of sleep in which a person is unable to fall in sleep. Nowadays, insomnia is an important area of clinical practice to seek the attention of the physician because a large number of patients come to the hospital suffering from insomnia as secondary conditions. It is sometimes a functional impairment during awake, which may occur at any age, but it is particularly common in the elderly. Insomnia is either short-term lasting up to 3 hours, or it may be long term lasting for > 3 hours. It may lead to developing dementia, lack of concentration, depression, mental irritation and increases the risk of cardio-vascular accidents along with increases the chances of a roadside accident.<sup>78 79</sup> Regarding its management some drug such as valerian extract has undergone multiple studies and appears to be moderately effective. Similarly, L-Arginine L-aspartate, S-adenosyl-L-homocysteine, and delta sleep inducing peptide (DSIP) appear to be significantly effective in the cases of insomnias.<sup>80 81</sup>

Improper sleep has a harmful impact on carbohydrate metabolism and endocrine function. Besides, it also reduces the metabolic activity in the brain with prolonging lack of sleep. The effects are similar to those seen in normal aging and, therefore, sleep debt may increase the severity of age-related chronic disorders.<sup>82</sup> Lack of sleep for prolonged period has been shown to affect cognitive functions of people involved in versatile activities along with interfering in mood and emotion. This is one of reason to increased tendency to fear, depression, and rage in the people having a deficiency in

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<sup>78</sup> Ma J, Jin X, Yang L and Liu ZL. Diarylheptanoids from the rhizomes of Zingiber officinale. *Phytochemistry*. 2004;65(8):1137-1143..24

<sup>79</sup> Shoji N, Iwasa A, Takemoto T, Ishida Y and Ohizumi Y. Cardiotonic principles of ginger (*Zingiber officinale* Roscoe).

<sup>80</sup> Westerterp-Plantenga M, Diepvans K, Joosen AM, Berube-Parent S and Tremblay A. Metabolic effects of spices, teas, and caffeine. *Physiol Behav*. 8-30-2006;89(1):85-91.

<sup>81</sup> Effect of *Moringa oleifera* Lam. leaves aqueous extract therapy on hyperglycemic rats Dolly Jaiswal, Prashant Kumar Rai, Amit Kumar, Shikha Mehta, Geeta Watal. *Journal of Ethnopharmacology* 123 (2009) 392–396

<sup>82</sup> Effect of moringa oleifera leaf extracts on the isolated rabbit heart and uterus Ntulume, R. Davis URI: <http://hdl.handle.net/10570/308> Date: 2010-11.

sleep. The mechanism and effects of sleep deficit are still evolving in the pathophysiology of sleep deficit.<sup>83 84 85</sup>

The concept of nidra in Ayurveda is quite comparable to the sleep of biomedical sciences. The nidra is so important for the maintenance of health and sustaining the life. This is true in the light of contemporary scientific knowledge too. According to Ayurveda, kapha and tamas are responsible for nidra even as modern studies attribute the occurrence of sleep to many factors including stimulation of certain areas of the brain. Ayurveda classifies the nidra based on the mode of origin while modern classification of sleep based on physiological variations seen in association with the different types of sleep. Some factors like food, activities, external stimuli, etc. affect nidra or sleep. Any variation in the normal sleep pattern is not at all desirable, and they may cause serious health problems that demand proper medical attention.[verse 52-54]

## Conclusion

The present chapter reveals that the clinical entity, consequences, and management of too obese, too lean, insomnia, along with categorization of good built, information and mechanism of sleep and measures to induce good sleep was fairly well known even in the classical period of Ayurveda, which is comparable to the latest development in this field. The Ayurvedic classics vividly describe the etiological factors, pathogenesis, clinical presentation, complications and its categories and treatment modalities of too obese, which has a striking resemblance to the latest development in this field. The *samprapti* (pathogenesis) of this disease is based on the specific dosha-dushya pattern. Besides, the special emphasis placed on vitiation of meda dhatu. The age-old ideas are now getting strong scientific support for the emerging concept of prediabetes, insulin resistance, and metabolic syndrome, signifying the role of lipid disorders in the pathogenesis, hypometabolic state (*ama* state) and immunodeficiency in these disorders. Numbers of complications have been described in this context including *prameha*, GI problems, skin disorders, etc. It is presumed that in the diathesis of complications, impaired status of agni, ojas and meda dhatu play an important role<sup>6</sup>.

On The overall assessment, the concept of overweight and obesity, emaciation, sleep and its type, indications, and contraindications of day sleep, the role of sleep in obesity, causes of insomnia and features of good and bad sleep along with features of good body built was a well-known entity since antiquity. The available descriptions appear

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<sup>83</sup> Phytochemical and Pharmacological Standardisation of Polyherbal Tablets For Hepatoprotective Activity Against Carbon Tetrachloride

<sup>84</sup> Induced Hepatotoxicity Vilas A. Arsul\*, R. O. Ganjiwale, P. G. Yeole International Journal of Pharmaceutical Sciences and Drug Research 2010; 2(4): 265-268

<sup>85</sup> Evaluation of laxative and cardiotonic activity of solanum indicum linn. Fruits Prashanta Kumar Deb Journal of Pharmacy and Phytotherapeutics J Pharm Phytother 2013, 1:3, 11 – 14

very contemporary and scientific. Certain therapeutic modalities have close resemblance with several non-drug approaches of modern medicine. These modalities can be combined judiciously for individualized prevention and cure of too obese, too lean and insomnia. The current approaches and management of too obese and too lean along with insomnia are still not satisfactory in the conventional system of medicine; this chapter provides a new outlook to scholars and researchers of Ayurveda, which is based on current publications and reports.

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## Langhanabrimhaniya Adhyaya

### Sutra Sthana Chapter 22. Reduction and nourishing therapies

#### Abstract

In continuation with the earlier chapter, the main course of treatments for the morbidly obese and the extremely thin/skinny/emaciated persons are described in this chapter. Ayurvedic therapeutics are categorized broadly under two categories like reducing (Apatarpana) or nourishing (Santarpana); It is further classified into six types: Langhana (Fasting, reducing), Brimhana (nourishing), Rukshana (drying), Stambhana (astringent/styptic), Snehana (oleation), and Swedana (sudation). Besides providing insights into these therapeutic measures, this chapter also describes specific advantages of these therapeutic procedures, pharmacological actions of properties and their indications in detail. The features of optimally administered techniques while understanding the consequences of their over and under-application are also included.

**Keywords:** Ayurvedic therapeutics, Santarpana(nourishing), Apatarpana(reducing), Langhana (fasting/reducing), Brimhana(nourishing), Snehana(oleation), Swedana(sudation), Stambhana(astringent/styptic), Rukshana(drying).

#### Introduction

In the earlier chapter on eight undesirable body features, the focus of the study was on two of the most undesirable kinds - sthula (obesity) and krisha (too thin/skinny/emaciated). The present chapter deals with types of treatments suitable for both conditions as well as other similar pathologies. There are four types of pathologies described in Ayurveda: atipravritti(excessive elimination), sanga (obstruction), sira granthi(tumor/varicosity), and vimarga gamana(improperly directed circulation). A disease could be of any of these four pathology types, but its affliction could manifest in different forms depending upon the unique body constitution of the patient and combination of dosha, dhatus, mala, etc., explained in prior chapters. To tackle such afflictions, Ayurveda describes six types of therapeutic measures: Langhana(reduction), Brimhana (nourishing), Rukshana (drying), Stambhana (astringent/styptic), Snehana (oleation), and Swedana (sudation). In the case of excessive discharge of anything from the body, Stambhana (a procedure that slows or stops the discharge) is advised. While in the case of obstructions, Langhana, Swedana, or Rukshana are advised. In cases of excessively vitiated dosha, Langhana (reducing therapy) is indicated to bring the elevated dosha to a state of equilibrium, whereas in a case of degeneration, Brimhana(nourishing therapy) and Snehana (oleation) are prescribed. The Snehana and Swedana therapies are described in detail in thirteenth and fourteenth chapters of this section respectively. This chapter describes remaining four therapies , i.e., Langhana, Brimhana, Stambhana, and Rukshana.

#### Sanskrit text, Transliteration and English Translation

अथातो लङ्घनबुंहणीयमध्यायं व्याख्यास्यामः ||१||

इति ह स्माह भगवानात्रेयः||२||

athātō laṅghanabṛmhāṇīyamadhyāyāṁ vyākhyāsyāmaḥ ||१||

iti ha smāha bhagavānātrēyah||२||

athAto la~gghanabRuMhaNlyamadhyAyaM vyAkhyAsyAmaH ||१||

iti ha smAha bhagavAnAtreyaH||२||

Now we shall expound the chapter “Langhanabrimhaniya” (Reducing and nourishing therapies). Thus said Lord Atreya. [1-2]

### Six types of therapies

तपःस्वाध्यायनिरतानात्रेयः शिष्यसत्तमान्।

षडग्निवेशप्रमुखानुक्तवान् परिचोदयन्॥३॥

लङ्घनं बृहणं काले रुक्षणं स्नेहनं तथा।

स्वेदनं स्तम्भनं चैव जानीते यः स वै भिषक्॥४॥

तमुक्तवन्तमात्रेयमग्निवेश उवाच ह॥५॥

भगवल्लङ्घनं किंस्विल्लङ्घनीयाश्च कीदृशाः।

बृहणं बृहणीयाश्च रुक्षणीयाश्च रुक्षणम्॥६॥

के स्नेहाः स्नेहनीयाश्च स्वेदाः स्वेद्याश्च के मताः।

स्तम्भनं स्तम्भनीयाश्च वक्तुमर्हसि तदगुरो!॥७॥

लङ्घनप्रभृतीनां च षण्णामेषां समासतः।

कृताकृतातिवृत्तानां लक्षणं वक्तुमर्हसि॥८॥

tapaḥsvādhyāyaniratānātrēyah śiṣyasattamān|

ṣaḍagnivēśapramukhānuktavān paricōdayan||३||

laṅghanām bṛmhāṇām kālē rūkṣaṇām snēhanaṁ tathā|

svēdanām stambhanaṁ caiva jānītē yaḥ sa vai bhiṣak||४||

tamuktavantamātrēyamagnivēśa uvāca ha॥५॥

bhagavam॒llaṅghanām kiṁsvillaṅghanīyāśca kīdrśāḥ|

bṛmhāṇām bṛmhāṇīyāśca rūkṣaṇīyāśca rūkṣaṇam||६||

kē snēhāḥ snēhanīyāśca svēdāḥ svēdyāśca kē matāḥ|

stambhanaṁ stambhanīyāśca vaktumarhasi tadgurō!||७||

Iaṅghanaprabṛtīnāṁ ca ṣaṇṇāmēśāṁ samāsataḥ|  
 kṛtākṛtātivṛttānāṁ lakṣaṇāṁ vaktumarhasi||8||  
 tapaHsvAdhyAyaniratAnAtreyaH shiShyasattamAn|  
 ShaDagniveshapramukhAnuktavAn paricodayan||3||  
 Ia~gghanaM bRuMhaNaM kAle rUkShaNaM snehanaM tathA|  
 svedanaM stambhanaM caiva jAnite yaH sa vai bhiShak||4||  
 tamuktavantamAtreyamagnivesha uvAca ha||5||  
 bhagava@mlla~gghanaM kiMsvilla~gghanlyAshca kIdRushAH|  
 bRuMhaNaM bRuMhaNlyAshca rUkShaNlyAshca rUkShaNam||6||  
 ke snehAH snehanlyAshca svedAH svedyAshca ke matAH|  
 stambhanaM stambhanlyAshca vaktumarhasi tadguro!||7||  
 Ia~gghanaprabhRutInAM ca ShaNNAmēShAM samAsataH|  
 kRutAkRutAtivRuttAnAM lakShaNaM vaktumarhasi||8||

To initiate a discussion, Lord Atreya addressed to his six disciples, who are dedicated to a life of penance and learning and who are led by Agnivesha, “He indeed is the true physician who knows the timely use of therapies to produce lightness, strength, dryness, unctuous, sweating and astringent effects.” Once Lord Atreya had spoken, Agnivesha asked the following questions, “O Thou, our worshipful preceptor, Sir, what are the therapies that are Langhana (reducing), Brimhana (nourishing), Rukshana (dryness-causing), Snehana (oleation) and, Swedana (sudation), and Stambhana (astringent/styptic)? Who are fit for this, O beloved teacher? You may kindly tell us all about them, and you may also tell briefly about the symptoms of proper application, improper application, and over-application of these six therapies.” [3-8]

## Definitions

तदग्निवेशस्य वचो निशम्य गुरुब्रवीत्।  
 यत् किञ्चिल्लाघवकरं देहे तल्लङ्घनं स्मृतम्॥९॥  
 बृहत्वं यच्छरीरस्य जनयेत्तच्च बृहणम्।  
 रौक्ष्यं खरत्वं वैशद्यं यत् कुर्यात्तदधि रूक्षणम्॥१०॥  
 स्नेहनं स्नेहविष्यन्दमार्दवक्लेदकारकम्।  
 स्तम्भगौरवशीतघ्नं स्वेदनं स्वेदकारकम्॥११॥  
 स्तम्भनं स्तम्भयति यद्गतिमन्तं चलं ध्रुवम्।

tadagnivēśasya vacō niśamya gururabrvīt|  
 yat kiñcillāghavakaram dēhē tallaṅghanam smṛtam||9||  
 br̥hattvar̥m yaccharīrasya janayēttacca bṛmhānam|  
 raukṣyam kharatvar̥m vaiśadyam yat kuryāttaddhi rūkṣaṇam||10||  
 snēhanam snēhaviṣyandamārdavaklēdakārakam |  
 stambhagauravaśītaghnam svēdanam svēdakārakam||11||  
 stambhanam stambhayati yadgatimantam calam dhruvam|  
 tadagniveshasya vaco nishamya gururabrvlt|  
 yat ki~jcillAghavakaraM dehe talla~gghanaM smRutam||9||  
 bRuhattvaM yaccharIrasya janayettacca bRuMhaNam|  
 raukShyaM kharatvaM vaishadyaM yat kuryAttaddhi rUkShaNam||10||  
 snehanaM snehaviShyandamArdavakledakArakam |  
 stambhagauravashītaghnaM svedanaM svedakArakam||11||  
 stambhanaM stambhayati yadgatimantaM calaM dhruvam|

Hearing these words of Agnivesha, the mentor (Atreya) explained the therapies thus.

- Whatever produces lightness or reduction in the body is known as Langhana (reducing/lightening) therapy.
- Whatever increases the bulk of the body and makes it strong is known as Brimhana (nourishing therapy).
- Rukshana(dryness causing) therapy is that which causes dryness, roughness, and coarseness.
- Whatever moisturizes and smoothens, causes unction, fluidity, and ooziness is called Snehana (oleation) therapy.
- Swedana (sudation) therapy is that which produces sweat, abolishes rigidity, heaviness, and coldness.

The therapy which results in inhibition of mobility and flow of bodily substances and stabilizes is called Stambhana (astringent or styptic therapy). [9-11]

### Pharmaco-therapeutic properties behind these effects

लघूष्णतीक्ष्णविशदं रुक्षं सूक्ष्मं खरं सरम्॥१२॥  
 कठिनं चैव यदद्रव्यं प्रायस्तल्लङ्घनं स्मृतम्।  
 गुरु शीतं मृदु स्निग्धं बहलं स्थूलपिच्छिलम्॥१३॥

प्रायो मन्दं स्थिरं श्लक्षणं द्रव्यं बृहणमुच्यते।  
 रुक्षं लघु खरं तीक्ष्णमुष्णं स्थिरमपिच्छिलम्॥१४॥  
 प्रायशः कठिनं चैव यद्द्रव्यं तदधि रुक्षणम्।  
 द्रवं सूक्ष्मं सरं स्निग्धं पिच्छिलं गुरु शीतलम्।  
 प्रायो मन्दं मृदु च यद्द्रव्यं तत्स्नेहनं मतम्॥१५॥  
 उष्णं तीक्ष्णं सरं स्निग्धं रुक्षं सूक्ष्मं द्रवं स्थिरम्।  
 द्रव्यं गुरु च यत् प्रायस्तदधि स्वेदनमुच्यते॥१६॥  
 शीतं मन्दं मृदु श्लक्षणं रुक्षं सूक्ष्मं द्रवं स्थिरम्।  
 यद्द्रव्यं लघु चोद्दिष्टं प्रायस्तत् स्तम्भनं स्मृतम्॥१७॥  
 laghūṣṇatīkṣṇaviśadarṁ rūkṣarṁ sūkṣmarṁ kharaṁ saram॥12॥  
 kaṭhinam caiva yaddravyam prāyastallaṅghanaṁ smṛtam|  
 guru śītāṁ mṛdu snigdham bahalam sthūlapicchilam॥13॥  
 prāyō mandaṁ sthiram ślakṣṇam dravyam bṛmhānamucyatē|  
 rūkṣarṁ laghu kharaṁ tīkṣṇamuṣṇam sthiramapicchilam॥14॥  
 prāyaśah kaṭhinam caiva yaddravyam taddhi rūkṣaṇam|  
 dravam sūkṣmarṁ saram snigdham picchilam guru śītalam|  
 prāyō mandaṁ mṛdu ca yaddravyam tatsnēhanam matam॥15॥  
 uṣṇam tīkṣṇam saram snigdham rūkṣam sūkṣmarṁ dravam sthiram|  
 dravyam guru ca yat prāyastaddhi svēdanamucyatē॥16॥  
 śītarṁ mandaṁ mṛdu ślakṣṇam rūkṣarṁ sūkṣmarṁ dravam sthiram|  
 yaddravyam laghu cōddiṣṭam prāyastat stambhanaṁ smṛtam॥17॥  
 laghUShNatlkShNavishadaM rUkShaM sUkShmaM kharaM saram॥12॥  
 kaThinaM caiva yaddravyaM prAyastalla~gghanaM smRutam|  
 guru shItaM mRudu snigdhaM bahalaM sthUlamicchilam॥13॥  
 prAyo mandaM sthiraM shlakShNaM dravyaM bRuMhaNamucyate|  
 rUkShaM laghu kharaM tīkShNamuShNaM sthiramapicchilam॥14॥  
 prAyashaH kaThinaM caiva yaddravyaM taddhi rUkShaNam|  
 dravaM sUkShmaM saraM snigdhaM picchilaM guru shItalam|

prAyo mandaM mRudu ca yaddravyaM tatsnehanaM matam||15||  
 uShNaM tlkShNaM saraM snigdhaM rUkShaM sUkShmaM dravaM sthiram|  
 dravyaM guru ca yat prAyastaddhi svedanamucyate||16||  
 shItaM mandaM mRudu shlakShNaM rUkShaM sUkShmaM dravaM sthiram|  
 yaddravyaM laghu coddiShTaM prAyastat stambhanaM smRutam||17||

- The drug or substance that possesses light, hot, sharply acting, clearing, dry, minute (subtle), rough, flowing (unstable) and hard qualities are used for langhana.
- The drug or substance that is used for brimhana (nourishing) therapy possesses heavy, cold, soft, unctuous, thick, gross, slimy, sluggish, stable and smooth qualities.
- The drug or substance that possesses dry, light, rough, sharply acting, hot, stable, non-slimy and primarily hard qualities is used for rukshana (drying) therapy.
- Snehana (oleation) therapy requires the drug or substance that possess liquid, minute (subtle), flowing (unstable), unctuous, slimy, heavy, cold, sluggish and soft qualities.
- The drug or substance that is used for swedana (sudation) therapy possesses hot, acute, flowing (unstable), unctuous, dry, minute (subtle), liquid, stable and heavy qualities.
- Finally, stambhana requires the drugs to possess cold, sluggish, soft, smooth, dry, minute (subtle), liquid, stable and light qualities. [12-17]

### Langhana (reducing or lightening) therapy

*Methods of langhana (reducing/lightening) therapy*

चतुष्प्रकारा संशुद्धिः पिपासा मारुतातपौ।  
 पाचनान्युपवासश्च व्यायामश्चेति लङ्घनम्॥१८॥  
 catusprakārā saṁśuddhiḥ pipāsā mārutātapaḥ  
 pācanānyupavāsaśca vyāyāmaścēti laṅghanam॥18॥  
 catuShprakArA saMshuddhiH pipAsA mAruAtapau|  
 pAcanAnyupavAsashca vyAyAmashceti la~gghanam||18||

The four purification therapies viz. vamana (emesis), virechana (purgation), Niruha basti (non-unctuous enema) and Nasya (nasal drug administration). Six other procedures viz. pipasa (control of thirst), maruta (exposure to wind/breathing exercises), aatapa (exposure to sunlight), pachana (applications of digestive measures), upawasa (fasting) and vyayama (exercise) are the ten methods of langhana (reducing) therapy. [18]

*Indications of langhana*

प्रभूतश्लेष्मपितास्मला: संसृष्टमारुताः| बृहच्छरीरा बलिनो लङ्घनीया विशुद्धिभिः||१९||

येषां मध्यबला रोगः कफपितसमुत्थिताः| वम्यतीसारहृदोगविसूच्यलसकज्वराः||२०||

विबन्धगौरवोद्गारहल्लासारोचकादयः| पाचनैस्तान् भिषक् प्राजः प्रायेणादावुपाचरेत्||२१||

एत एव यथोद्दिष्टा येषामल्पबला गदाः| पिपासानिग्रहैस्तेषामुपवासैश्च ताञ्जयेत्||२२||

रोगञ्जयेन्मध्यबलान् व्यायामातपमारुतैः| बलिनां किं पुनर्येषां रोगाणामवरं बलम्||२३||

त्वग्दोषिणां प्रमीढानां स्निग्धाभिष्यन्दिबृहिणाम्| शिशिरे लङ्घनं शस्तमपि वातविकारिणाम्||२४||

prabhūtaślēśmapittāsramalāḥ saṁśr̥ṣṭamārutāḥ| bṛhaccharīrā balinō laṅghanīyā  
viśuddhibhīḥ||19||

yēśāṁ madhyabalā rōgāḥ kaphapittasamutthitāḥ|  
vamyatīsārahṛdrōgavisūcyalasakajvarāḥ||20||

vibandhagauravōdgārahṛllāsārōcakādayaḥ| pācanaistān bhiṣak prājñāḥ  
prāyēṇādāvupācarēt||21||

ēta ēva yathōddiṣṭā yēśāmalpabalā gadāḥ| pipāsānigrahaistēśāmupavāsaīśca  
tāñjayēt||22||

rōgāñjayēnmadhyabalān vyāyāmātapatamārutaiḥ| balināṁ kiṁ punaryēśāṁ  
rōgāñāmavaram balam||23||

tvagdōṣīnāṁ pramīḍhānāṁ snigdhābhiṣyandibṛhmīnāṁ| śisirē laṅghanāṁ śastamapi  
vātavikāriṇāṁ||24||

prabhUtasheShmapittAsramalAH saMsRuShTamArutAH| bRuhaccharIrA balino  
la~gghanlyA vishuddhibhiH||19||

yeShAM madhyabalA rogAH kaphapittasamutthitAH|  
vamyatIsArahRudrogavisUcyalasakajvarAH||20||

vibandhagauravodgArahRullAsArocakAdayaH| pAcanaistAn bhiShak prAj~jaH  
prAyeNAdAvupAcaret||21||

eta eva yathoddiShTA yeShAmalpabalA gadAH| pipAsAnigrahaisteShAmupavAsaishca  
tA~jjayet||22||

rogA~jjayenmadhyabalAn vyAyAmAtapamArutaiH| balinAM kiM punaryeShAM  
rogANAmavaraM balam||23||

tvagdoShiNAM pramIDhAnAM snigdhAbhiShyandibRuMhiNAM| shishire la~gghanaM  
shastamapi vAtavikAriNAM||24||

Those who are suffering from excessive vitiation of kapha, pitta,blood and waste products, are afflicted with obstructed vata and who have bulky and strong bodies should be treated using shodhana (purificatory) procedures of Langhana.

Those who are suffering from diseases caused by moderate increase of kapha and pitta such as vomiting, diarrhea, heart disease, acute intestinal irritation (cholera), intestinal sluggishness (alasaka), fever, constipation, heaviness of body, eructation, nausea, anorexia and similar conditions should first be treated with applications of digestive measures by wise physician.

Above mentioned diseases, with mild intensity, should be mitigated by the restraint from food and drink (fasting and control of thirst).

In a strong person with diseases of moderate intensity, any treatment measure should include physical exercise and exposure to sunlight and the wind. Further, strong patients suffering from mild disease or a little imbalance of dosha should be treated in the same manner i.e. exercise and exposure to the sun and the wind.

Those who are suffering from skin disorders, urinary disorders, those consuming excess of unctuous food, with excess discharges in the body and undergone excess nourishing therapy should be treated with langhana therapy. In a season of shishira (winter), langhana is suitable for patients with vata-dominant disorders also (in addition to above). [19-24]

### Brimhana (nourishing) therapy

अदिग्धविद्धमक्लिष्टं वयस्थं सात्म्यचारिणाम्।

मृगमत्स्यविहङ्गानां मांसं बृहणमुच्यते॥२५॥

क्षीणाः क्षताः कृशा वृद्धा दुर्बला नित्यमध्वगाः।

स्त्रीमद्यनित्या ग्रीष्मे च बृहणीया नराः स्मृताः॥२६॥

शोषाशर्ऊग्रहणीदोषैर्व्याधिभिः कर्शिताश्च ये।

तेषां क्रव्यादमांसानां बृहणा लघवो रसाः॥२७॥

स्नानमुत्सादनं स्वप्नो मधुराः स्नेहबस्तयः।

शर्कराक्षीरसर्पिषि सर्वेषां विद्धि बृहणम्॥२८॥

adigdhaviddhamakliṣṭam vayastham sātmyacāriṇām|

mṛgamatsyavihaṅgānām māṁsam bṛhmaṇamucyatē||25||

kṣīṇāḥ kṣatāḥ kṛśā vṛddhā durbalā nityamadhvagāḥ|

strīmadyanityā grīṣmē ca bṛhmaṇīyā narāḥ smṛtāḥ||26||

śōśārśōgrahaṇīdōṣairvyādhibhiḥ karśitāśca yē|

tēśāṁ kravyādamāṁsānāṁ bṛṁhaṇā laghavō rasāḥ||27||  
 snānamutsādanāṁ svapnō madhurāḥ snēhabastayaḥ|  
 śarkarāksṭrasarpīṁsi sarvēśāṁ viddhi bṛṁhaṇam||28||  
 adigdhaviddhamakliShTaM vayasthaM sAtmyacAriNAm|  
 mRugamatsyaviha~ggAnAM mAMsaM bRuMhaNamucyate||25||  
 kShINAH kShatAH kRushA vRuddhA durbalA nityamadhvagAH|  
 strImadyanityA grIShme ca bRuMhaNlyA narAH smRutAH||26||  
 shoShArshograhaNldoShairvyAdhibhiH karshitAshca ye|  
 teShAM kravyAdamAMsAnAM bRuMhaNA laghavo rasAH||27||  
 snAnamutsAdanaM svapno madhurAH snehabastayaH|  
 sharkarAkShirasarpIMShi serveShAM viddhi bRuMhaNam||28||

The meat of adult (mature) animals, fish, and birds which are found roaming in their suitable natural surroundings, which are healthy (or disease-free) and have not been killed by poisonous weapons and is unspoiled, is considered to be ideal for brimhana(nourishing therapy).

The persons requiring such therapy are those suffering from wasting of the body, wounded, consumptive, emaciated, old, weak, weary of long journeys, and excessively indulged in sexual intercourse, alcohol addiction, and for all persons in the summer season.

Light to digest soup made up of meat of carnivorous animals and birds is nourishing to persons who have been weakened due to diseases such as consumption, piles, assimilation disorders (grahani dosha), or have been wasted by other (similar) diseases.

Bath, unction, sleep, medicated enema with sweet drugs, unctuous enema, sugar mixed milk, and ghee are considered ideal for brimhana (nourishing). [25-28]

### Rukshana (drying) therapy

कटुतिक्तकषायाणं सेवनं स्त्रीष्वसंयमः।  
 खलिपिण्याकतक्राणं मैद्वादीनं च रुक्षणम्॥२९॥  
 अभिष्यण्णा महादोषा मर्मस्था व्याधयश्च ये।  
 ऊरुस्तम्भप्रभृतयो रुक्षणीया निदर्शिताः॥३०॥  
 स्नेहाः स्नेहयितव्याश्च स्वेदाः स्वेद्याश्च ये नराः।  
 स्नेहाध्याये मयोक्तास्ते स्वेदाख्ये च सविस्तरम्॥३१॥

kaTutiktakasāyāñāṁ sēvanāṁ strīśvasarṇyamah̄|  
 khalipiñyākatakrāñāṁ madhvādīnāṁ ca rūkṣaṇam||29||  
 abhiṣyāññā mahādōṣā marmasthā vyādhayaśca yē|  
 ūrustambhaprabhṛtayō rūkṣaṇīyā nidarśitāḥ||30||  
 snēhāḥ snēhayitavyāśca svēdāḥ svēdyāśca yē narāḥ|  
 snēhādhyāyē mayōktāstē svēdākhyē ca savistaram||31||  
 kaTutiktakaShAyANAM sevanaM strIShvasaMyamaH|  
 khalipiNyAkatakrANAM madhvAdInAM ca rUkShaNam||29||  
 abhiShyaNNA mahAdoShA marmasthA vyAdhayashca ye|  
 UrustambhaprabhRutayo rUkShaNlyA nidarshitAH||30||  
 snehAH snehayitavyAshca svedAH svedyAshca ye narAH|  
 snehAdhyAye mayoktAste svedAkhye ca savistaram||31||

Regular use of substances having pungent, bitter and astringent tastes, indulgence in women, use of oil-cakes of mustard and tila(sesame), buttermilk, honey and similar things tend to induce dryness.

Rukshana is indicated in diseases caused by blocking of bodily channels by excess discharges or in cases of greater morbidity of dosha diseases of vital organs, in stiffening of thighs (urustambha), and in similar conditions. Unctuousness, persons suitable for oleation therapy, and suitable for sudation therapy have been described in detail in earlier chapters concerned. [29-31]

### Stambhana (astringent/styptic) therapy

द्रवं तन्वसरं यावच्छीतीकरणमौषधम्|  
 स्वादु तिक्तं कषायं च स्तम्भनं सर्वमेव तत्||32||  
 पितक्षाराग्निदग्धा ये वम्यतीसारपीडिताः|  
 विषस्वेदातियोगार्ताः स्तम्भनीया निर्दर्शिताः||33||  
 dravaṁ tanvasaraṁ yāvacchītīkaraṇamauṣadham|  
 svādu tiktāṁ kaṣāyāṁ ca stambhanāṁ sarvamēva tat||32||  
 pittakṣārāgnidagdhā yē vamyatīsārapīḍitāḥ|  
 viṣasvēdātiyōgārtāḥ stambhanīyā nidarśitāḥ||33||  
 dravaM tanvasaraM yAvacchItIkaraNamauShadham|

svAdu tiktaM kaShAyaM ca stambhanaM sarvameva tat||32||

pittakShArAgnidagdhA ye vamyatlsArapIDitAH|

viShasvedAtiyogArtAH stambhanlyA nidarshitAH||33||

All the drugs that are characterized by liquid, thin, stable, cold properties and possessing sweet, bitter and astringent tastes are used for Stambhana (astringent/styptic) therapy. Stambhana is indicated in patients afflicted with pitta, burned with kshara (alkali) and fire, those who are afflicted with vomiting, diarrhea, and those who are suffering from complications of excess sudation and poisoning. [32-33]

### Signs of adequate and excess langhana

वातमूत्रपुरीषाणां विसर्गं गात्रलाघवे।

हृदयोद्गारकण्ठास्यशुद्धौ तन्द्राक्लमे गते॥३४॥

स्वेदे जाते रुचौ चैव क्षुत्पिपासासहोदये।

कृतं लङ्घनमादेश्यं निर्व्यथे चान्तरात्मनि॥३५॥

पर्वभेदोऽग्नमर्दश्च कासः शोषो मुखस्य च।

क्षुत्प्रणाशोऽरुचिस्तृष्णा दौर्बल्यं श्रोत्रनेत्रयोः॥३६॥

मनसः सम्भ्रमोऽभीक्षणमूर्धवातस्तमो हृदि।

देहाग्निबलनाशश्च लङ्घनोऽतिकृते भवेत्॥३७॥

vātamūtrapurīṣāṇāṁ visargē gātralāghavē|

hṛdayōdgārakanṭhāsyāśuddhau tandrāklamē gatē॥34॥

svēdē jātē rucau caiva kṣutpipāsāsahōdayē|

kṛtam laṅghanamādēśyam nirvyathē cāntarātmani॥35॥

parvabhēdō’ṅgamardaśca kāsaḥ śōṣō mukhasya ca|

kṣutprāṇāśō’rucistrṣṇā daurbalyam śrōtranētrayōḥ॥36॥

manasaḥ sambhramō’bhīkṣṇamūrdhvavātastamō hṛdi|

dēhāgnibalanāśaśca laṅghanē’tikṛtē bhavēt॥37॥

vAtamUtrapurIShANAM visarge gAtralAghave|

hRudayodgArakaNThAsyashuddhau tandrAklame gate॥34॥

svede jAte rucau caiva kShutpipAsAsahodaye|

kRutaM la~gghanamAdeshyaM nirvyathe cAntarAtmani॥35॥

parvabhedo<sub>a</sub>ggamardashca kAsaH shoSho mukhasya ca|  
 kShutpraNAsho~arucistRuShNA daurbalyaM shrotranetrayoH||36||  
 manasaH sambhramo~abhIkShNamUrdhvavAtastamo hRudi|  
 dehAgnibalanAshashca la<sub>gghane</sub>atikRute bhavet||37||

The signs of proper administration of langhana include thorough elimination of flatus, urine, and feces, feeling of lightness in body, cleansing in heart, eructation, throat and mouth, the disappearance of drowsiness and exhaustion, the appearance of perspiration and reappearance of taste, hunger and thirst along with a feeling of well-being.

The signs of excessive administration of langhana include pain in the joints, body aches, cough, dryness of the mouth, complete loss of hunger, anorexia, thirst, weakness of hearing and vision, confusion of mind, frequent eructation, fainting, frequent upward movement of vata, feeling of darkness in the heart (tamo hriddi), loss of body weight, loss of digestive power and strength. [34-37]

### Signs of adequate and excess brimhana (nourishing) therapy

बलं पुष्ट्युपलम्भश्च काश्यदोषविवर्जनम्|  
 लक्षणं बृहिते स्थौल्यमति चात्यर्थबृहिते||३८||  
 कृतातिकृतलिङ्गं यल्लङ्घिते तदधि रुक्षिते |३९|  
 balam puṣṭyupalambhaśca kārṣyadōṣavivarjanam|  
 lakṣaṇam bṛmhite sthauiyamati cātyarthabṛmhite||३८||  
 kṛtātikṛtaliṅgam yallaṅghitē taddhi rūkṣitē |३९|  
 balaM puShTyupalambhashca kArshyadoShavivarjanam|  
 lakShaNaM bRuMhite sthauiyamati cAtyarthaRuMhite||३८||  
 kRutAtikRutali~ggaM yalla~gghite taddhi rUkShite |३९|

Through the proper administration of brimhana, one gets strength, robustness, and freedom from the diseases of emaciation. On excessive application of brimhana, one suffers from corpulence (obesity). The symptoms of proper and excessive administration of rukshana are the same as those of langhana. [38-38½]

### Signs of adequate and excess stambhana (astringent/styptic) therapy

स्तम्भितः स्याद् बले लब्धे यथोक्तैश्चामयैर्जितैः||३९||  
 श्यावता स्तब्धगात्रत्वमुद्वेगो हनुसङ्ग्रहः|  
 हृदवर्चोनिग्रहश्च स्यादतिस्तम्भितलक्षणम्||४०||

stambhitah syādbalē labdhē yathōktaiścāmayairjitaiḥ||39||  
 śyāvatā stabdhagātratvamudvēgō hanusaṅgrahah|  
 hr̥dvarcōnigrahaśca syādatistambhitalakṣaṇam||40||  
 stambhitāḥ syAdbale labdhe yathoktaishcAmayairjitaiḥ||39||  
 shyAvatA stabdhagAtratvamudvego hanusa~ggrahaḥ|  
 hRudvarconigrahashca syAdatistambhitalakShaNam||40||

Properly administered stambhana helps the patient to regain his strength and get rid of afflicted diseases as told earlier. Excessive administration of stambhana causes blackish discoloration, stiffness in body parts, uneasiness, the stiffness of jaw, feeling of constriction in cardiac region, and constipation. [39-40]

लक्षणं चाकृतानां स्यात् षण्णमेषां समासतः।  
 तदौषधानां धातूनामशमो वृद्धिरेव च॥४१॥  
 इति षट् सर्वरोगाणां प्रोक्ताः सम्यगुपक्रमाः।  
 साध्यानां साधने सिद्धा मात्राकालानुरोधिनः॥४२॥  
 lakṣaṇaṁ cākṛtānāṁ syāt ṣaṇṇāmēṣāṁ samāsataḥ।  
 tadauṣadhānāṁ dhātūnāmaśamō vṛddhirēva ca॥४१॥  
 iti ṣaṭ sarvarōgānāṁ prōktāḥ samyagupakramāḥ।  
 sādhyānāṁ sādhanē siddhā mātrākālānurōdhināḥ॥४२॥  
 IakShaNaM cAkRutAnAM syAt ShaNNAMeShAM samAsataH|  
 tadauShadhAnAM dhAtUnAmashamo vRuddhireva ca॥४१॥  
 iti ShaT sarvarogANAM proktAH samyagupakramAH|  
 sAdhyAnAM sAdhane siddhA mAtrAkAIAnurodhinaH॥४२॥

The signs and symptoms of all these six therapies, if inadequately administered, leave the dosha unpacified. Rather, they get aggravated.

Thus, these six most useful therapies, if administrated properly in all diseases which have been described, with due consideration of time and dosage, are sure to accomplish the cure of all curable disorders. [41-42]

## Summary

भवति चात्र-

दोषाणां बहुसंसर्गात् सङ्कीर्यन्ते हयुपक्रमाः।

षट्त्वं तु नातिवर्तन्ते त्रित्वं वातादयो यथा॥४३॥

bhavati cātra-

dōśāñāṁ bahusaṁsargāt saṅkīryantē hyupakramāḥ|

ṣaṭtvāṁ tu nātivartantē tritvāṁ vātādayō yathā॥४३॥

bhavati cAtra-

doShANAM bahusaMsargAt sa~gkIryante hyupakramAH|

ShaTtvAM tu nAtivartante tritvaM vAtAdayo yathA॥४३॥

As there are many combinations of dosha, these therapies also have multiple variations. However, the number of these therapies do not exceed than six, just like dosha are three in number. [43]

तत्र श्लोकाः-

इत्यस्मिंलङ्घनाध्याये व्याख्याताः षडुपक्रमाः।

यथाप्रश्नं भगवता चिकित्सा यैः प्रवर्तते॥४४॥

tatra ślōkāḥ-

ityasmimँlaṅghanādhyāyē vyākhyātāḥ ṣadupakramāḥ|

yathāpraśnaṁ bhagavatā cikitsā yaiḥ pravartatē॥४४॥

tatra shlokAH-

ityasmi@mla~gghanAdhyAye vyAkhyAtAH ShaDupakramAH|

yathAprashnaM bhagavatA cikitsA yaiH pravartate॥४४॥

Now the (re-capitulatory) verse –

Thus in the chapter titled “Reducing and nourishing therapies,” the six therapies which comprise the entire field of therapeutics have been expounded by the Lord Atreya (teacher) as per the inquiries of the disciples. [44]

## Tattva Vimarsha (Fundamental Principles)

- Langhana(reducing) therapy is indicated in obese persons and those diseases with obstructive pathology due to excessively vitiated dosha.
- Brimhana (nourishing) therapy is indicated in emaciated persons and those diseases with degenerative pathology.
- The group of six treatments (shadupakramas) includes langhana, rukshana, swedana, brimhana, snehana, and stambhana. The first three of these are reducing in nature, while the latter three are nourishing.

## Vidhi Vimarsha (Applied Inferences)

Above described six therapies are grouped into “Apatarpana” (langhana, or reducing) and “Santarpana” (brimhana, or nourishing). In “Apatarpana”— lightening, dryness, and sudation therapies, and in “Santarpana”— nourishing, unctuousness, and astringent therapies have been mentioned. (3-8)

The rukshana (dryness) therapy produces dryness, roughness, and coarseness. In unctuous therapy, fluidity is due to liquefaction or melting or dissolution of dosha,dhatu, and mala. The mode of action of sudation therapy is due to warmth or internal heat produced by therapy. The mode of action of astringent therapy is due to inhibition of mobility and flow of dosha, dhatu, and mala. Here the meaning to be understood is that the materials - dosha, dhatu, and mala, which are flowing by slow or fast in rate by nature, to be checked or stopped. This condition refers only to the effects of atisara (diarrhea), raktasrava(bleeding), visha(poisoning), daha(burning), and vedana(pain). The drugs described here for each therapy are understood to possess such qualities as associated with them. There are, however, exceptional cases. For example, pippali and bhallataka have “ushna” guna (heat), but their action is brimhana. Priyangu is “sheeta” guna(cool) but has langhana effect.

**Table 1: Pharmaco-therapeutic properties of six therapies**

S. No.

Langhana

Brimhana

Rukshana

Snehana

Swedana

Stambhana

1

Laghu

Guru

Laghu

Guru

Guru

Laghu

2

Ushna

Shita

Ushna

Shita

Ushna

Shita

3

Tikshna

Mridu

Tikshna

Mridu

Tikshna

Mridu

4

—

Drava

Drava

Drava

5

Vishada

Pichchila

Vishada

Pichchila

6

Bahala

7

Ruksha

Snigdha

Ruksha  
Snigdha

Ruksha– Snigdha

Ruksha

8

Manda

Manda

Manda

9

Sukshma

Sthula

Sthula

Sukshma

Sukshma

10

Khara

Shlakshna

Khara

Shlakshna

11

Sara

Sthira

Sthira

Sara

Sthira- Sara

Sthira

12

kathina

## Kathina

There are seven overlapping qualities in the drugs employed in brimhana and snehana and five overlapping qualities in the drugs employed in brimhana and stambhana.

Though they are of similar qualities, they should not be concluded to be one and the same. In langhana drugs, the qualities of lightness are dominant, while in rukshana, the drugs employed possess predominantly drying or desiccating qualities. Further, lightness can be induced through non-drug based therapies (adravyabhuta) such as fasting. However, dryness can only be brought about by drugs.

Thus, all these therapies are distinct even when possessing similarities in certain qualities. The “Apatarpana” type of treatments is related to agni + vayu + akasha mahabhuta dominant qualities in general whereas the “Santarpana” type of treatments is related to Prithvi + jala.

All these (above mentioned) six types of treatments should be used in treating all the diseases. (9-17)

Exposure to the wind can produce lightness in the body, but exposure to cold wind cannot produce lightness. The practical mode of “maruta sevana” includes walking or running in open place as exercise. The various types of breathing exercises including “pranayama” are included in this category. The drugs which are employed to improve digestion are dominant in vayu and agni mahabhuta. “Atapa sevana” includes sunbath or exposure to ultraviolet rays present in the sunlight of early morning. (18)

Langhana is contraindicated in diseases / disorders caused purely by vata. But when vata gets associated with excessively provoked kapha, pitta, rakta, and mala, shodhana (purificatory) method of lightening therapy should be used. Even though asthapana basti (non-unctuous enema) is vata shamaka (pacifying), it is ruksha in nature and can aggravate the vata. So asthapana basti (non-unctuous enema) should be used judiciously wherever indicated.

The word *adau* (आदौ) is used for disorders caused by a moderate intensity of kapha and pitta, such as chhardi (vomiting). In these conditions, after reducing dosha by digestive medicines (pachana), pacification of dosha (samshamana) shall be done. But sometimes the pachana method may not be enough to treat the disease, requiring other methods of langhana to be explored. In strong people where the diseases manifest with the mild or little intensity of dosha, any treatment course includes vyayama (exercise) and maruta atapa sevana(exposure to wind and the sun).

The increase of dhatu takes place naturally in the winter season (shishira ritu) due to visarga kala (winter solstice). This increase in dhatu occurs in conjunction with kapha. At this juncture, the rational application of langhana does not produce any adverse effect in people afflicted with vata diseases or possessing vata Prakriti. [14/10-11]

The three categories of langhana according to the intensity of disease and dosha aggravation are described in detail in the third chapter of Vimana Sthana.

### *Contemporary researches*

A case study by Kambale et.al. showed that rukshana upakrama therapy in the form of Takra Siddha Yavagu (Gruel for adverse effects due to improper administration of ghee) and Udvartana helped in normalizing lipid profile, reduction of weight; BMI, body circumference and skin fold thickness in case of dyslipidemia.<sup>86</sup>

### **Related research and articles**

Langhana, Brimhana, Snehana (unction therapy), Swedana, Rukshana, Stambhana

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<sup>86</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

## Santarpaniya Adhyaya

### Sutra Sthana Chapter 23. Over-nutrition, under-nutrition and its disorders

#### Abstract

Diseases are caused due to over nutrition and under nutrition. This chapter enlists the causative factors affecting nutritional status leading to two categories of diseases viz. Santarpana (over-nutrition) and apatarpana (under nutrition). The dietary and lifestyle management of these two disease categories is also elaborated. Nutraceutical preparations, weight reducing recipes, therapeutic procedures like panchakarma and other associated procedures are described with medicaments. The chapter also contains a comprehensive list of commonly available herbs used in treatment of these diseases.

**Keywords:** *santarpana* (over-nutrition), *apatarpana* (under-nutrition), management of over-nutrition induced disorders, nutrition deficiency disorders.

## Introduction

In the series of chapters described for management principles, the present chapter describes two most commonly observed conditions in society viz. santarpana(over-nutrition) and apatarpana(undernutrition). It is sequenced after langhana and brimhana therapies. The present chapter enlists causes and diseases due to over-nutrition and under-nutrition and their management through diet and medicaments. It is a blend of nutraceutical food supplements with medicaments. Complications arising due to sedentary lifestyle and over-nutritive diet are also enlisted in the chapter with diseases caused due to undernutrition/ malnourishment and their management with simple dietary preparations. The pharmacological effect of herbs used in management are elaborated in detail as well.

Santarpana(overnutrition) leads to vitiation of kapha dosha and meda dhatu and various obstructive pathologies, whereas apatarpana(undernutrition) leads to vata-pitta dosha vitiation and various degenerative pathologies. This concept has been emphasized in this chapter.

## Sanskrit text, Transliteration and English Translation

अथातः सन्तर्पणीयमध्यायं व्याख्यास्यामः||१||

इति ह स्माह भगवानात्रेयः||२||

athātah santarpanīyamadhyāyam vyākhyāsyāmah||1||

iti ha smāha bhagavānātrēyah||2||

athAtaH santarpaNlyamadhyAyaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Santarpaniya” (Over-nutrition, under-nutrition and its disorders). Thus said Lord Atreya. [1-2]

### Causes of *santarpana* induced diseases

सन्तर्पयति यः स्निग्धैर्मधुरैर्गुरुपिच्छिलैः।  
नवान्नैर्नवमद्यैश्च मांसैश्चानूपवारिजैः॥३॥  
गोरसैगौंडिकैश्चान्नैः पैष्टिकैश्चातिमात्रशः।  
चेष्टाद्वेषी दिवास्वप्नशय्यासनसुखे रतः॥४॥  
रोगास्तस्योपजायन्ते सन्तर्पणनिमित्तजाः॥५॥  
santarpayati yaḥ snigdhairmadhuraирgurupicchilaiḥ|  
navānnairnavamadyaiśca māṁsaiścānūpavārijaiḥ॥३॥  
gōrasairgauḍikaiścānnaiḥ paistīkaiścātimātraśaḥ|  
cēṣṭādvēṣī divāsvapnaśayyāsanasukhē rataḥ॥४॥  
rōgāstasyōpajāyantē santarpaṇanimittajāḥ॥५॥  
santarpayati yaH snigdhairmadhuraирgurupicchilaiH|  
navAnnairnavamadyaishca mAmsaishcAnUpavArijaiH॥३॥  
gorasairgauDikaishcAnnaiH paishTikaishcAtimAtrashaH|  
ceShTAdveShI divAsvapnashayyAsanasukhe rataH॥४॥  
rogAstasyopajAyante santarpaNanimittajAH॥५॥

Excessive consumption of unctuous, sweet, heavy to digest and slimy food, new grains (especially new rice), new wine, flesh of animals living in marshy area or born in water, cow's milk and its products, and those prepared with sugar or molasses, varieties of cakes lead to *santarpana*. Those who indulge in sedentary, inactive lifestyles and sleep during the day are prone to *santarpaniya vyadhis* (i.e. *santarpana* induced diseases). [3-4]

### List of *santarpana* induced diseases

प्रमेहपिडकाकोठकण्डूपाण्डवामयज्वराः॥७॥  
कुष्ठान्यामप्रदोषाश्च मूत्रकृच्छ्रमरोचकः।  
तन्द्रा क्लैब्यमतिस्थौल्यमालस्यं गुरुगात्रता॥६॥  
इन्द्रियस्रोतसां लेपो बुद्धेर्मोहः प्रमीलकः।  
शोफाश्चैवंविधाश्चान्ये शीघ्रमप्रतिकृतः॥७॥

pramēhapidakākōthakandūpāṇḍvāmayajvarāḥ||5||  
 kuṣṭhānyāmapradōṣāśca mūtrakṛcchramarōcakah|  
 tandrā klaibyamatisthaulyamālasyaṁ gurugātratā||6||  
 indriyasrōtasāṁ lēpō buddhērmōhah pramīlakah|  
 śōphāścaivaṁvidhāścānyē śīghramapratikurvataḥ||7||  
 pramehapiDakAkoThakaNDUpANDvAmayajvarAH||5||  
 kuShThAnyAmapradoShAshca mUtrakRucchramarocakaH|  
 tandrA klaibyamatisthaulyamAlasyaM gurugAtratA||6||  
 indriyasrotasAM lepo buddhermohaH pramllakaH|  
 shophAshcaivaMvidhAshcAnye shlgħramapratikurvataH||7||

Due to above mentioned causative factors, if the effects of *santarpana* are not treated properly, one suffers from various diseases such as obstinate urinary disorders including diabetes, carbuncles, urticaria, itching, *pandu* (anaemia), *amaja* diseases (i.e., due to formation of *ama*), *jwara*, obstinate skin diseases, diseases secondary to vitiation of *ama*, dysuria, anorexia or appetite related complaints, *tandra* (drowsiness/sleepiness), *klaibya* (erectile and sexual dysfunctions), obesity, laziness, heaviness of the body, adhesion or blockages in the channels as well as sense organs, delusion, various types of edema, and such of other diseases. [5-7]

### Management of *santarpana*-induced diseases

शस्तमुल्लेखनं तत्र विरेको रक्तमोक्षणम्।  
 व्यायामश्चोपवासश्च धूमाश्च स्वेदनानि च॥८॥  
 śastamullēkhanaṁ tatra virēkō raktamōkṣaṇam|  
 vyāyāmaścōpavāsaśca dhūmāśca svēdanāni ca॥८॥  
 shastamullekhanaM tatra vireko raktamokShaNam|  
 vyAyAmashcopavAsashca dhUmAshca svedanAni ca॥८॥

*Santarpaniya vyadhis* and their complications should be managed by ullekhana(therapeutic emesis), virechana (therapeutic purgation), raktamokshana(blood-letting), specific exercises, therapeutic fasting, *dhooma* (hot fomentation with smoke of medicinal plants), and swedana(sudation). [8]

सक्षोद्रौश्चाभयाप्राशः प्रायो रुक्षान्नसेवनम्।  
 चूर्णप्रदेहा ये चोक्ताः कण्डूकोठविनाशनाः॥९॥

sakṣaudraścābhayāprāśah prāyō rūksānnasēvanam|  
 cūrṇapradēhā yē cōktāḥ kaṇḍūkōṭhavināśanāḥ||9||  
 sakShaudrashcAbhayAprAshaH prAyo rUkShAnnasevanam|  
 cUrNapradehA ye coktAH kaNDUKoThavinAshanAH||9||

Formulations made up of haritaki(Terminalia Chebula), such as agastyaharitaki mixed with honey, habituating with ruksha food (i.e., without using unctuous substances like oil, ghee etc.), those powders and poultice described in treatment of pruritus and urticaria (mentioned in the third chapter of this section) are advised. [9]

त्रिफलारग्वधं पाठं सप्तपर्णं सवत्सकम्।  
 मुस्तं समदनं निम्बं जलेनोत्कवथितं पिबेत्॥१०॥  
 तेन मेहादयो यान्ति नाशमभ्यस्यतो ध्रुवम्।  
 मात्राकालप्रयुक्तेन सन्तर्पणसमुत्थिताः॥११॥  
 triphalāragvadham pāṭhāṁ saptaparṇāṁ savatsakam|  
 mustaṁ samadanam nimbam jalēnōtkvathitam pibēt||10||  
 tēna mēhādayō yānti nāśamabhyasyatō dhruvam|  
 mātrākālaprayuktēna santarpaṇasamutthitāḥ||11||  
 triphalAragvadhaM pAThAM saptaparNaM savatsakam|  
 mustaM samadanaM nimbaM jalenotkvathitaM pibet||10||  
 tena mehAdayo yAnti nAshamabhyasyato dhruvam|  
 mAtrAkAlaprayuktena santarpaNasamutthitAH||11||

The decoction of *triphala* (amalaki (*Emblica officinalis*), *bibhitaki* (*Terminalia bellirica*), and *haritaki* (*Terminalia chebula*)), *aragvadha* (*Cassia fistula*), *patha* (*Cissampelos pareira*), *saptaparna* (*Alstonia scholaris*), *vatsaka* (*Holarrhena antidysenterica*), *musta* (*Cyperus rotundus*), *madana* (*Randia dumetorum*) and *nimba* (*Azadirachta indica*), mixed together and boiled in water, is advised for consumption regularly. By regular use of this decoction, in the right dose and at the right time, *santarpaniya vyadhi* like *madhumeha* and other diseases can be controlled properly. [10-11]

मुस्तमारग्वधः पाठ त्रिफला देवदारु च।  
 श्वदंष्ट्रा खदिरो निम्बो हरिद्रे त्वक्च वत्सकात्॥१२॥  
 रसमेषां यथादोषं प्रातः प्रातः पिबन्नरः।  
 सन्तर्पणकृतैः सर्वव्याधिभिः सम्प्रमुच्यते॥१३॥

एभिश्चोद्वर्तनोदृधर्षस्नानयोगोपयोजितैः।

त्वग्दोषाः प्रशमं यान्ति तथा स्नेहोपसंहितैः॥१४॥

mustamāragvadhaḥ pāṭhā triphalā dēvadāru ca|

śvadāṁśtrā khadirō nimbo haridrē tvakca vatsakāt||12||

rasamēśāṁ yathādōṣāṁ prātaḥ prātaḥ pibannarahi|

santarpaṇakṛtaiḥ sarvairvyādhhibhiḥ sampramucyatē||13||

ēbhiścōdvartanōddharśasnānayōgōpayōjitaḥ|

tvagdōṣāḥ praśamaṁ yānti tathā snēhōpasāṁhitaiḥ||14||

mustamAragvadhaH pATHA triphala devadAru ca|

shvadaMShTrA khadiro nimbo haridre tvakca vatsakAt||12||

rasameShAM yathAdoShaM prAtaH prAtaH pibannaraH|

santarpaNakRutaiH sarvairvyAdhibhiH sampramucaye||13||

ebhishcodvartanoddharShasnAnayogopayojitaiH|

tvagdoShAH prashamaM yAnti tathA snehopasaMhitaiH||14||

All *santarpaniya* diseases can be cured, if the juices (decoction) of *musta*, *aaragvadha*, *paatha*, *triphala*, *devadaru* (*Cedrus deodara*), *shvadamshtra* (*Trinbulus terrestris*), *khadira* (*Acacia catechu Wild*), *nimba*, *haridra* (*Curcuma longa*), *daruharidra* (*Berberis aristata*) and the bark of *vatsaka* (*Holarrhena anti-dysenterica*) are consumed every morning (depending upon the dominant dosha in the disease).

If the above herbs are used in a powdered form for *udvartana* with or without massage or the decoction of the above herbs are used for medicinal bath or if the oil made up of above drugs is used for body application it relieves all the skin disorders caused due to *santarpaniya vyadhis*.[12-14]

कुञ्ठं गोमेदको हिङ्गु क्रौञ्चास्थि त्र्यूषणं वचा।

वृषकैले श्वदंष्ट्रा च खराह्वा चाश्मभेदकः॥१५॥

तक्रेण दधिमण्डेन बदराम्लरसेन वा।

मूत्रकृच्छ्रं प्रमेहं च पीतमेतद्व्यपोहति॥१६॥

kuṣṭham gōmēdakō hiṅgu krauñcāsthī tryūṣaṇam vacā|

vṛṣakailē śvadāṁśtrā ca kharāhvā cāśmabhēdakah||15||

takrēṇa dadhimaṇḍēna badarāmlarasēna vā|

mūtrakrcchram̄ pramēham̄ ca pītamētadvyapōhati||16||  
 kuShThaM gomedako hi~ggu krau~jcAsthi tryUShaNaM vacA|  
 vRuShakaile shvadaMShTrA ca kharAhvA cAshmabhedakaH||15||  
 takreNa dadhimaNDena badarAmlarasena vA|  
 mUtrakRucchraM pramehaM ca pltametadvyapohati||16||

*Kustha* (*Saussurea lappa*), *gomedaka* (onyx), *hingu* (*Ferula narthex*), bones of the *krauncha* bird (*Ardea Jaculator*, demoiselle crane), *sunthi* (*Zingiber officinalis*), *pippali* (*Piper longum*), *maricha* (*Piper nigrum*), *vacha* (*Acorus calamus*), *vasa* (*Adhatoda vasica* Nees), *ela* (*Elettaria cardamoum*), *gokshura* (*Tribulus terrestris*), *kharahva* (*Trachyspermum roxburghianum*), and *ashmabherda* (*Bergenia ligulata* – crushed and mixed with buttermilk, whey and the juice of a sour variant of *badara* (*Zizyphus jujuba*) are used to treat *mutrakruchchra* (dysuria) and *prameha* (obstinate urinary disorders including diabetes mellitus characterized by excess frequency of micturition). [15-16]

तक्राभयाप्रयोगैश्च त्रिफलायास्तथैव च।  
 अरिष्टानां प्रयोगैश्च यान्ति मेहादयः शमम्॥१७॥  
 takrābhayāprayōgaiśca triphalāyāstathaiva ca|  
 arīṣṭānāṁ prayōgaiśca yānti mēhādayaḥ śamam||17||  
 takrAbhayAprayogaishca triphalAyAstathaiva ca|  
 ariShTAnAM prayogaishca yAnti mehAdayaH shamam||17||

*Haritaki* (*Terminalia chebula*) with butter milk, *triphalā* (*Terminalia chebula*, *Terminalia belerica* Roxb. And *Emblica officinalis* Gaertn.) and *arishta* (different types of medicinal alcoholic preparations) are prescribed for the treatment of obstinate urinary disorders including diabetes mellitus and such other diseases. [17]

त्र्यूषणं त्रिफला क्षौद्रं क्रिमिघ्नमजमोदकः।  
 मन्थोऽयं सक्तवस्तैलं हितो लोहोदकाप्लुतः॥१८॥  
 tryūṣaṇam̄ triphalā kṣaudram̄ krimighnamajamōdakah|  
 manthō'yam̄ saktavastailam̄ hito lōhōdakāplutah||18||  
 tryUShaNaM triphalA kShaudraM krimighnamajamodakaH|  
 mantho~ayaM saktavastailaM hito lohodakAplutaH||18||

*Mantha* (thin gruel) prepared of *trikatu* (*Zingiber officinale*, *Piper longum*, and *Piper nigrum*), *triphalā* (*Terminalia chebula*, *Terminalia belerica* Roxb., and *Emblica officinalis* Gaertn.), honey, *vidanga* (*Embelia ribes* Burm f.), *ajamoda* (*Trachyspermum roxburghianum*), roasted wheat flour or coarse ground meal, oil and the decoction of

*agaru* (Aquila agallocha Roxb.) help to cure the diseases due to over-nourishment.  
[18]

व्योषं विडङ्गं शिगूणि त्रिफलां कटुरोहिणीम्।  
बृहत्यौ द्वे हरिद्रे द्वे पाठामतिविषां स्थिराम्॥१९॥  
हिङ्गु केबुकमूलानि यवानीधान्यचित्रकान्।  
सौवर्चलमजाजीं च हपुषां चेति चूर्णयेत्॥२०॥  
चूर्णतैलघृतक्षौद्रभागाः स्युर्मानतः समाः।  
सक्तूनां षोडशगुणो भागः सन्तर्पणं पिबेत्॥२१॥

vyōṣam viḍaṅgam śigrūṇi triphalāṁ kaṭurōhiṇīm|  
bṛhatyau dvē haridrē dvē pāṭhāmativisāṁ sthirām||19||  
hiṅgu kēbukamūlāni yavānīdhānyacitrakān|  
sauvarcalamajājīm ca hapuṣāṁ cēti cūrṇayēt||20||  
cūrṇatailaghṛ̥takṣaudrabhāgāḥ syurmānataḥ samāḥ|  
saktūnāṁ šōḍaśaguṇō bhāgah santarpaṇāṁ pibēt||21||  
vyoShaM viDa~ggaM shigrUNi triphalAM kaTurohiNIm|  
bRuhatyau dve haridre dve pAThAmativiShAM sthirAm||19||  
hi~ggu kebukamUIAni yavAnIdhAnyacitrakAn|  
sauvarcalamajAjIM ca hapuShAM ceti cUrNayet||20||  
cUrNatailaghRutakShaudrabhAgAH syurmAnataH samAH|  
saktUnAM ShoDashaguNo bhAgaH santarpaNaM pibet||21||

*Trikuṭu* (Zingiber officinale), *Piper langum* and *Piper nigrum*), *vidanga* (Embelia ribes), varieties of *shigru* (*Moringa oleifera*), *triphalā*, *katurohini* (*Picrorhiza kurroa*), *brihati* (*Solanum indicum*), *kantakari* (*Solanum xanthocarpum*), *haridra* (*Curcuma longa*), *daaruharidra* (*Berberis aristata* D.C.), two varieties of *patha* (*Cissampelos pareira*), *ativisha* (*Aconitum heterophyllum*), *shalaparni* (*Desmodium gangeticum*), *hingu* (*Ferula narthex*), root of *kebuka* (*Costus speciosus*), *yavani* (*Trachyspermum ammi*), *dhanya* (*Coriandrum sativum*), *citraka* (*Plumbago Zeylanica*), *sonchal* salt, *ajaji* (*Cuminum cyminum*), and *hapusha* (*Juniperus communis*) – all the above herbs powdered and mixed with equal quantities of oil, ghee and honey, added with sixteen times its volume of *sattu* (roasted corn flour) and water are used to prepare a formulation for indications (mentioned in the following verse.) [19-21]

## Indications

प्रयोगादस्य शाम्यन्ति रोगाः सन्तर्पणोत्थिताः।  
प्रमेहा मूढवाताश्च कुष्ठान्यर्शसि कामलाः॥२२॥  
प्लीहा पाण्डवामयः शोफो मूत्रकृच्छ्रमरोचकः।  
हृद्रोगो राजयक्षमा च कासः श्वासो गलग्रहः॥२३॥  
क्रिमयो ग्रहणीदोषाः श्वैत्र्यं स्थौल्यमतीव च।  
नराणां दीप्यते चाग्निः स्मृतिर्बुद्धिश्च वर्धते॥२४॥  
prayogādasya śāmyanti rōgāḥ santarpaṇotthitāḥ।  
pramēhā mūḍhavātāśca kuṣṭhānyarśāṁsi kāmalāḥ॥२२॥  
plīhā pāṇḍvāmayah śōphō mūtrakṛcchramarōcakah।  
hṛdrōgō rājayakṣmā ca kāsaḥ śvāsō galagrahah॥२३॥  
krimayō grahaṇīdōshāḥ śvaitryam̄ sthaulyamatīva ca।  
narāṇāṁ dīpyatē cāgnih smṛtirbuddhiśca vardhatē॥२४॥  
prayogAdasya shAmyanti rogAH santarpaNotthitAH।  
pramehA mUDhavAtAshca kuShThAnyarshAMsi kAmalAH॥२२॥  
pllhA pANDvAmayaH shopho mUtrakRucchramarocakaH।  
hRudrogo rAjayakShmA ca kAsaH shvAso galagrahaH॥२३॥  
krimayo grahaNIdoShAH shvaitryaM sthaulyamatlva ca।  
narANAM dlpyate cAgniH smRutirbuddhishca vardhate॥२४॥

The above preparation is useful in the treatment of obstinate urinary disorders including diabetes mellitus, *mudhavata* (sluggishness of the bowels), obstinate skin diseases including leprosy, piles, jaundice-like hepatobiliary diseases, diseases of the spleen, anemia-like hematological disorders, edema, dysuria, anorexia, heart disease, tuberculosis-like immune-compromised conditions, cough, respiratory disorders, spasmodic obstruction of the throat, parasitic infestation, *grahani* (digestive disorders), vitiligo and morbid obesity caused by overnutrition. This also stimulates the power of digestion and enhances memory and intellect. [22-24]

व्यायामनित्यो जीर्णाशी यवगोधूमभोजनः।  
सन्तर्पणकृतैर्दोषैः स्थौल्यं मुक्त्वा विमुच्यते॥२५॥  
उक्तं सन्तर्पणोत्थानामपतर्पणमौषधम्॥२६।

vyāyāmanityō jīrṇāśī yavagōdhūmabhōjanah|  
 santarpaṇakṛtairdōṣaiḥ sthaulyam muktvā vimucyatē||25||  
 uktam santarpaṇōthānāmapatrapaṇamausadham|26|  
 vyAyanityo jIrnAshI yavagodhUmabhojanaH|  
 santarpaNakRutairdoShaiH sthaulyaM muktvA vimucyate||25||  
 uktaM santarpaNotthAnAmapatarpaNamauShadham|26|

Regular exercise, intake of food only after complete digestion of the previous meal, and regular consumption of barley and wheat are some of the ways for management of obesity and diseases due to overnutrition. In the next verses, formulations and regimen required for the management of malnourishment has been described. [25-26]

### Diseases due to *apatarpana*(under-nutrition) and their treatment

वक्ष्यन्ते सौषधाश्चोर्ध्वमपतर्पणजा गदाः||२६||  
 देहाग्निबलवर्णोजःशुक्रमांसपरिक्षयः।  
 ज्वरः कासानुबन्धश्च पार्श्वशूलमरोचकः||२७||  
 श्रोत्रदौर्बल्यमुन्मादः प्रलापो हृदयव्यथा।  
 विष्मूत्रसङ्ग्रहः शूलं जड्घोरुत्रिकसंश्रयम्||२८||  
 पर्वास्थिसन्धिभेदश्च ये चान्ये वातजा गदाः।  
 ऊर्ध्ववातादयः सर्वे जायन्ते तेऽपतर्पणात्॥२९॥  
 vakṣyantē sauṣadhāścōrdhvamapatarpaṇajā gadāḥ||26||  
 dēhāgnibalavarṇaujaḥśukramāṁsaparikṣayah|  
 jvarah kāsānubandhaśca pārśvaśūlamarōcakah||27||  
 śrōtradaurbalyamunmādah pralāpō hṛdayavyathā|  
 viñmūtrasaṅgrahah śūlam jaṅghōrutikasamśrayam||28||  
 parvāsthisandhibhēdaśca yē cānyē vātajā gadāḥ|  
 ūrdhvavātādayah sarvē jāyantē tē'patarpaṇāt||29||  
 vakShyante sauShadhAshcordhvamapatarpaNajA gadAH||26||  
 dehAgnibalavarNaujaHshukramAMsaparikShayaH|  
 jvaraH kAsAnubandhashca pArshvashUlamarocakaH||27||  
 shrotradaurbalyamunmAdaH pralApo hRudayavyathA|

viNmUtrasa~ggrahaH shUlAM ja~gghorutrikasaMshrayam||28||

parvAsthisandhibhedashca ye cAnye vAtajA gadAH|

UrdhvavAtAdayaH sarve jAyante te~apatarpaNAt||29||

Emaciation of the body, reduction in the power of digestion, strength, complexion, ojas (vital essence of body related with immunity and general strength), semen and muscle tissue, jwara (continuous fever and cough like condition), pain in chest and flanks, anorexia, weakness in the power of hearing sounds, psychosis, delirium, pain in cardiac region, accumulation of stool and urine, pain in calf, thigh and lumber regions, cracking pain in fingers, bones and joints, and such other diseases due to the vitiation of vata(such as *urdhava* vata upward movement of vata), etc. are caused due to improper nutrition and starvation. [27- 29]

### Management of diseases due to undernutrition

तेषां सन्तर्पणं तज्जैः पुनराख्यातमौषधम्।

यत्तदात्वे समर्थं स्यादभ्यासे वा तदिष्यते ॥३०॥

tēṣāṁ santarpaṇaṁ tajjñaiḥ punarākhyātamauṣadham|

yattadātvē samarthaṁ syādabhyāsē vā tadiṣyatē ||30||

teShAM santarpaNaM tajj~jaiH punarAkhyAtamauShadham|

yattadAtve samarthaM syAdabhyAse vA tadiShyate ||30||

For the treatment of such ailments, therapies that nourish instantly need to be administered regularly and for a long period of time. [30]

सद्यःक्षीणो हि सद्यो वै तर्पणेनोपचीयते।

नर्ते सन्तर्पणाभ्यासाच्चिरक्षीणस्तु पुष्यति॥३१॥

sadyahkṣīṇō hi sadyō vai tarpaṇēnōpacīyatē|

nartē santarpaṇābhyaśāccirakṣīṇastu puṣyati||31||

sadyaHkShINo hi sadyo vai tarpaNenopacyate|

narte santarpaNAbhyAsAccirakShINastu puShyati||31||

A person suffering from acute and drastic weight-loss should be treated with a regimen that nourishes instantly, but one suffering from a chronic type of emaciation requires long term consumption of nourishments. [31]

देहाग्निदोषभैषज्यमात्राकालानुवर्तिना।

कार्यमत्वरमाणेन भैषजं चिरदुर्बले॥३२॥

dēhāgnidōśabhaiṣajyamātrākālānuvartinā|  
 kāryamatvaramāṇēna bhēṣajam ciradurbalē||32||  
 dehAgnidoShabhaiShajyamAtrAkAIAnuvartinA|  
 kAryamatvaramANena bheShajaM ciradurbale||32||

Some of the critical factors for deciding a course of treatment of emaciation in chronic patients include: body constitution, power of digestion, predominant dosha, form of medicine, dose, and season and time of administration (of the therapy). [32]

हिता मांसरसास्तस्मै पयांसि च घृतानि च।  
 स्नानानि बस्तयोऽन्युद्गास्तर्पणास्तर्पणश्च ये॥३३॥  
 hitā māṁsarasaśtasmai payānsi ca ghṛtāni ca|  
 snānāni bastayō'bhyaṅgāstarpanāstarpanāśca yē||33||  
 hitA mAMsarAsAstasmai payAMsi ca ghRutAni ca|  
 snAnAni bastayo<sub>abhyo</sub>ggAstarpaNAstarpaNAshca ye||33||

For this purpose, (of *santarpana*), soups made out of flesh, milk, various ghee preparations (clarified butter), along with activities such as bath, oil massage, and medicated enema (processed with *santarpana* medicines) are advocated for nourishment. [33]

ज्वरकासप्रसक्तानां कृशानां मूत्रकृच्छ्रणाम्।  
 तृष्ण्यतामूर्ध्ववातानां वक्ष्यन्ते तर्पणा हिताः॥३४॥  
 jvarakāsaprasaktānāṁ kṛśānāṁ mūtrakṛcchriṇām|  
 tṛṣyatāmūrdhvavātānāṁ vakṣyantē tarpaṇā hitāḥ||34||  
 jvarakAsaprasaktAnAM kRushAnAM mUtrakRucchriNAm|  
 tRuShyatAmUrdhvavAtAnAM vakShyante tarpaNA hitAH||34||

For these patients suffering from continuous jwara (fever like conditions), cough, emaciation, dysuria, thirst and upward movement of vata, the following nourishing drinks are prescribed. [34]

शर्करापिप्पलीतैलघृतक्षौद्रैः समांशकैः।  
 सक्तुद्विगुणितो वृष्यस्तेषां मन्थः प्रशस्यते॥३५॥  
 śarkarāpippalītailaghṛtakṣaudraiḥ samāṁśakaiḥ|  
 saktudviguṇitō vr̥ṣyastēṣāṁ manthaḥ praśasyatē||35||

sharkarApippalltailaghRutakShaudraiH samAMshakaiH|  
saktudviguNito vRuShyasteShAM manthaH prashasyate||35||

*Mantha* (thin gruel) prepared from sugar, *pippali* (Pipper longum), oil, ghee, and honey - in equal quantities added with double the quantity of *saktu* (roasted corn flour) is considered an aphrodisiac and is useful in such conditions (as mentioned in above verse). [35]

सक्तवो मदिरा क्षौद्रं शर्करा चेति तर्पणम्।  
पिबेन्मारुतविण्मूत्रकफपितानुलोमनम्॥३६॥

saktavō madirā kṣaudram śarkarā cēti tarpaṇam|  
pibēnmārutaviṇmūtrakaphapittānulōmanam||36||

saktavo madirA kShaudraM sharkarA ceti tarpaNam|  
pibenmArutaviNmUtrakaphapittAnulomanam||36||

*Saktu* (roasted corn flour/ coarse ground meal) with *madira* (wine), honey and sugar are refreshing and shall be consumed for the elimination of flatus (obstructed vata), faeces, urine, kapha and pitta. [36]

फाणितं सक्तवः सर्पिदधिमण्डोऽम्लकाञ्जिकम्।  
तर्पणं मूत्रकृच्छ्रधनमुदावर्तहरं पिबेत्॥३७॥

phāṇitam saktavah sarpirdadhimanḍō'amlakāñjikam|  
tarpaṇam mūtrakṛcchraghnāmudāvartaharam pibēt||37||

phANitaM saktavaH sarpirdadhimaND<sub>amla</sub>kAjjikam|  
tarpaNaM mUtrakRucchraghnāmudAvartaharaM pibet||37||

A nourishing drink prepared of *phanita* (inspissated juice of the sugar cane and other plants), *saktu* (coarse ground meal/ roased corn flour), ghee, whey, and sour gruel nourishes and should be consumed for the treatment of dysuria and *udavarta*. [37]

मन्थः खर्जूरमृद्वीकावृक्षाम्लाम्लीकदाडिमैः।  
परुषकैः सामलकैर्युक्तो मद्यविकारनुत्॥३८॥

manthaḥ kharjūramṛdvīkāvṛkṣāmlāmlīkadāḍimaiḥ|  
parūṣakaiḥ sāmalakairyuktō madyavikāranut||38||

manthaH kharjUramRudvIkAvRukShAmIAmIlkadADimaiH|  
parUSHakaiH sAmalakairyukto madyavikAranut||38||

*Mantha* (thin guel) prepared from date-palm, dry grapes, *vrikshamla* (*Garcinia indica* Ehois), *amlika* (*Tamarindus indica*), *dadima* (*Punica granatum*), *parushaka* (*Crewia asiatica*), and *amalaki* (*Emblica officinalis* Gaertn.), are useful for management of disorders caused due to excess consumption of alcohol. [38]

स्वादुरम्लो जलकृतः सस्नेहो रूक्ष एव वा|

सदयः सन्तर्पणो मन्थः स्थैर्यवर्णबलप्रदः||३९||

svāduramlō jalakṛtah sasnēhō rūkṣa ēva vā|

sadyah santarpaṇō manthah sthairyavarṇabalapradah||39||

svAduramlo jalakRutaH sasneho rUkSha eva vA|

sadyaH santarpaNo manthaH sthairyavarNabalapradaH||39||

Sweet and sour *mantha* prepared from water with or without unctuous substances refreshes instantly and gives stability, good complexion and strength. [39]

## Summary

तत्र श्लोकः-

सन्तर्पणोत्था ये रोगा रोगा ये चापतर्पणात्|

सन्तर्पणीये तेऽध्याये सौषधाः परिकीर्तिताः||४०||

tatra ślōkah-

santarpaṇōtthā yē rōgā rōgā yē cāpatarpaṇāt|

santarpaṇīyē tē'dhyāyē sauṣadhāḥ parikīrtitāḥ||४०||

tatra shlokaH-

santarpaNotthA ye rogA rogA ye cApatarpaNAt|

santarpaNlye te~adhyAye sauShadhAH parikIrtitAH||40||

Diseases caused due to overnutrition and undernutrition, along with their treatment, have been described in this chapter. [40]

## Tattva Vimarsha (Fundamental Principles)

1. Intake of calorie rich and excessive food and nutrition with little or no physical exercise, results in increased body tissues. This contributes to causing diseases such as metabolic syndrome. These conditions are managed by purification therapies leading to reduction (langhana), and prescribing a regimen of physical exercise, appropriate dietary changes, fomentation and reducing drugs.

2. Excessive physical and/or mental activities without adequate nutrition causes nutritional deficiency diseases like wasting and psychosis. Treatment is high calorie but less filling diet, rest, medicated oil enema and massage. In cases of acute weight loss, nutrition should be given immediately while in the case of chronic loss, the process should be gradual but prolonged.

## Vidhi Vimarsha(Applied Inferences)

The word *santarpana* means the act of satiating, restoration or refreshing. In this context, the term is used for overeating or overnutrition. Dietary items that are *prithvi* and *apa mahabhuta* dominant lead to *santarpana*. Quality, quantity, and age of certain food items can cause alteration in the digestability of the food. For example, aged food grains are light to digest than new food grains. Therefore, the new food grains tend to increase weight, and same quantity of aged food grains do not increase weight. What changes occur in aging of the grains and their mechanism of action needs to be studied.

### I. Properties of *Santarpnakarak* food articles

Unctuous (*snigdha*), sweet (*madhura*), heavy to digest (*guru*), and slimy (*pichhilla*) foods predominantly have Prithvi and jala mahabhuta, leading to an increase in kapha and rasa dhatu.

The functional trait of such food articles is *snigdha* (oily) guna is *sneha* (unctuousness), *mriduta* (softness), and *ardrata* (malleability, fluidity)<sup>87 88</sup>. *Snigdha* food articles include those derived from lipids and fat molecules. Similarly, *madhura* (sweetness) is a property of food substances that possess predominantly sweet taste - not just perceived at the tongue, but also in many parts/tissues along our digestive system. *Guru* is the primary property that indicates “heaviness” of a food item, and a *guru* food article is heavy to digest and increases bulkiness of the tissues. *Guru* is the opposite of agni and hence delays digestion and metabolism and is used, therefore, in therapies that require nourishment, enhancement of physical strength, etc (brimhana, agnimaandyakara, upalepa, bala, upachayaandtarpana). Finally, *pichhilla*” is sliminess and stickiness, and indicates food items that vitiate kapha and mamsa and meda dhatu particularly.

Today's research is consistent with the above findings of Ayurveda. Researchers acknowledge that taste receptors exist in the upper gastrointestinal tract as well. These receptors are “primarily located in the intestinal brush and enteroendocrine cells, and

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<sup>87</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>88</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

recognize sugars, D-amino acids, sweet proteins, and artificial sweeteners<sup>89</sup>, per their research. Peptide YY (PYY) exerts its action through NPY receptors by inhibiting gastric motility and increasing water and electrolyte absorption in the colon<sup>90</sup>. PYY may also suppress pancreatic secretion, as it is secreted by neuro-endocrine cells in the ileum and colon in response to a meal, and has been shown to reduce appetite. It works by slowing the gastric emptying, thereby increasing the efficiency of digestion and nutrient absorption after a meal. Considering the effects of sweet food substances, PYY, in certain quantities, helps induce satiety in a person and thus in excess, inhibits appetite. This study clearly suggests the impact of *madhura rasa* and *snigdha* food substances in creating *santarpaniya vyadhi* or increased anabolism. Like GLP -1, GIP is related to metabolism and inflammation.

Thus, it can be said that excess of *madhura*, *guru*, *snigdha* and *pichchilla* foods can have inflammatory effect at the molecular level. If the above properties elaborated by Charak are to be understood, it can be clearly stated that they increase body tissues in volume and delay the digestion of food. This seems to be acceptable and the effect may be mediated through peptide YY. As it delays digestion and increases the nutrient uptake, these food substances lead to *santarpana*.

## II. Impact of age on grains and grain-based food products

The age of food grains helps determine the quality as well as digestibility of food. *Shuka dhanya* (monocotyledons) and *shami dhanya* (dicotyledons) that are old /aged are easy to digest and are dry in property as compared to new ones. [Cha.Sa.Sutra Sthana 27/309] *Nava anna*, or fresh, non-aged rice, millet, etc. increase kapha and are heavier than old grains. Charak notes that all new and fresh grains are heavy and induce *santarpana*, while aged grains are lighter to digest.

Sharangdhara in Purva Khanda also talks of new and old grains and recommends six to twelve month-old grains to be used. Biochemical changes that help in digestion may be occurring after certain aging of grains. Per researchers (Seguchi, 1993), aging of flour and grains does enhance their functionality as ingredients for cakes and batter. Cereals can be stored for long periods without microbial spoilage. However, biochemical changes also occur during aging. There is great possibility that certain amino acids and phyto chemicals get stabilized in the grain which make them safe for consumption. Eventually, the grain respires, dry matter is lost and functional and nutritional aspects of

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<sup>89</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

<sup>90</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

the grain are altered. Age related changes have great influence on the viscosity of any batter made out of wheat-flour and the water-binding ability of the wheat flour (Shelke et al, 1992). In addition, the starch granule surface protein is found to increase up to three to four times with aging. However, prolonged aging is not recommended (Pomeranz et al, 1968). The moisture content of grains, the storage temperature and relative humidity have been shown to exert dramatic changes in the acidity, pH, free amino nitrogen, crude protein, and protein quality. Significant changes in soluble sugars and amylase contents of the grains have also been reported during storage at elevated temperature<sup>91</sup>.

It is to be noted from various studies that the protein content of wheat grains and flour do not change significantly over time (Kim et al 2003). While protein quantity may not change, protein quality does. In one of the studies it was noted that total content of starch gets reduced after certain time when the grains are kept within controlled temperature. In India, wheat gets harvested in the months of March and early April. The atmospheric temperature varies from 25°C – 45°C in summer in different parts of India. The total starch content of the flour got decreased by 50 % when stored at 50°C in comparison to the freshly harvested wheat grains<sup>92 93</sup>. This is a significant change that occurs due to aging of wheat. If the starch content of wheat is reduced with time, aged wheat will have lower calorific value and lower glycemic index. It will also be easier to digest. Similar changes have been observed in rice after aging. Post harvest storage has, it has been observed, significant effect on eight known textural properties that are important to the sensory characteristics of cooked rice: adhesion to lips, hardness, cohesiveness of mass, roughness of mass, toothpull, particle size, toothpack, and loose particles<sup>94</sup>. A difference is observed between ageing of rice flour and rice starch. It is evident that pasting properties of fresh and aged rice are different. It is also reported that the cell wall structure is decomposed by endo –xylanase during storage which led to the changes in amylograms of rice fours<sup>95</sup>.

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<sup>91</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

<sup>92</sup> Sushruta. Uttara Tantra, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. Sushruta Samhita. 8th ed. Varanasi: Chaukhamba Orientalia;2005.

<sup>93</sup> Vaghbata. Uttara Sthana, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. Ashtanga Hridayam. 1st ed. Varanasi: Krishnadas Academy;2000.

<sup>94</sup>

<sup>95</sup> extract sourced from

<http://cosbin2001.blogspot.com/2014/12/health-benefits-of-jaggery-or-gur.html>

These changes in physiochemical properties of grains exert their effect on digestibility of the food. It has been studied through experiments that the moisture content is higher in new grains indicating predominance of jala mahabhuta and prithvi mahabhuta which again tends towards *santarpana*. Aging of rice has an impact on its glycemic index and glycemic load. New grain may have higher glycemic index than the older grain. Due to the effect of time on these food stuffs there are greater possibilities that certain amino acids and phyto chemicals get stabilized in the grain that make them safe for consumption.

*Navamadya/fresh wine:* New or fresh wines should not be consumed because they cause heaviness and create imbalances in all the three dosha while old wines promote circulation in the body, increase digestion, lightness and enhance taste in food. The effect of aging on tannins and resveratrol has been studied and shows significant difference between old and fresh wine. Aging results in altered and reduced phenolic contents in red wine. Anthocyanin tannin complexes can be formed which can stabilize the colour of red wines resulting in wines that are tasteless, fruity and less astringent after aging<sup>96</sup>. Oxidation reactions involving phenolics might also change the chemical and sensory profile of wines<sup>97</sup>. Oxygen in the air is always ready to react with unprotected juice or wine and many of the substances present get adversely affected by oxidation, producing unpleasant, bitter, off-odours and off-tastes. However, it is recognized that some degree of oxygenation may be beneficial for the formation of red wine, but the quality of white wines is generally impaired by excessive air exposure. As tannins and anthocyanins interact with oxygen, which diffuses during barrel storage, these compounds further polymerize and become less astringent. Red wines become lighter in colour, and proanthocyanidins and other polyphenolics eventually aggregate in larger molecules which accumulate as sediment over time at the base of the bottle. In contrast, white wines often deepen in colour, turning darker honey colors as they oxidize and age<sup>98</sup>.

The phenolic compound present in a bottle of wine slowly changes as it ages. The most important component of wine is tannin which binds with proteins. High tannin containing wine inhibits saliva's ability to lubricate mouth and imparts astringent feeling in mouth. Aged wine undergoes polymerization of tannins. This makes tannin sediments settle to

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<sup>96</sup> Shastri KN, Chaturvedi GN, Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shastri KN, Chaturvedi GN, Editors. Vidyotini Commentary Charak Samhita.1st ed. Varanasi: Chaukhamba Bharti Academy;2004.

<sup>97</sup> Shukla VD, Tripathi RD. Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shukla VD, Tripathi RD Vaidyamanorama Commentary Charak Samhita.1st ed. Delhi; Chaukhamba Sanskrit Pratisthana, 2002.

<sup>98</sup> Chandola HM, Bhatia S. Concept of Diabetes mellitus in Ayurveda and its treatment with certain indigenous drugs. AYU Int 2001;1:84-87.

the bottom of the container and lose its property to bind with proteins. Aged wines are very aromatic and possess fruity flavors.

Ageing of wine solely depends on its storage and oxidation of the wine. Normally new wines contain about .02 - .03% acetic acid. This is reduced in aged wine if it is packed properly. This physico-chemical change in aged wine, change in taste and aroma modify its pharmacological effects. Increase in its antioxidant properties and change in Anthocyanin tannin complex makes wine more effective after age. There is also a possibility that chemical process in ageing of wine may also change the molecular size of tannins which might become more bio-available after consumption.

### III. Categories of food leading to anabolism

**Gorasa** (milk and milk products): Over the years, there have been many conflicting views in scientific journals and from nutritionists regarding dairy products and it is often difficult to conclude about their health benefits. Charak has clearly mentioned in various texts, including this chapter and in Prameha Nidana, that excessive consumption of dairy products, meat, and carbohydrates may lead to many metabolic disorders. It may also create inflammation at a molecular level. Common allergens like casein and gluten create inflammation in the gut. Investigators have correlated higher levels of milk antibodies with rheumatoid arthritis<sup>99</sup> (Arvikar, 2013). Studies suggest (Feskanich D. et al) that cow's milk could be responsible for an irreversible inability to metabolize blood sugar, and could cause Type I and type II diabetes. This study also suggests that severe disorders such as rheumatoid arthritis, diabetes, heart attacks, multiple sclerosis, and osteoporosis could be attributed to diet rich in milk<sup>100</sup>.

Thus, there has been much research concerning dairy products, besides meat and other forms of complex proteins, which shows their excessive consumption in a very unfavourable<sup>101</sup>. These types of food have multifold impact on the health of a person. These can change the gut flora leading to disorders of absorption, adversely affecting auto-immunity and production of antibodies. It has been shown by certain researchers

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<sup>99</sup> Tripathi SN, Chandola HM. Study on variations in diabetes mellitus (Prameha) with special reference to plasma insulin, cortisol and catecholamines. In Bajaj JS, ed. Diabetes mellitus in Developing Countries. New Delhi, India: Interprint, 1984:125-128.

<sup>100</sup> Sharma H, Chandola HM..Prameha in Ayurveda: Correlation with Obesity, Metabolic Syndrome, and Diabetes Mellitus.Part 1-Etiology, Classification, and Pathogenesis. The Journal of Alternative and Complementary Medicine.2011. 17(6):491-496.

<sup>101</sup> Kajaria Divya, Chandola H.M. Dislipidemia Cause or Consequence of Diabetes-Reanalyzing the pathogenesis with the vision of Ayurveda. Journal of Diabetes and Health, Photon. 2014.

that excess of meat and dairy products leads to immune-activation<sup>102 103</sup>. Excess of meat also has certain enzymatic toxicity which can lead to insulin resistance –a basic pathology of obesity, heart disease and type II diabetes.

All the above types of food mentioned herein could explain 57% of the total structural variation in gut microbiota whereas changes in genetics accounted for no more than 12%<sup>104</sup>. This indicates that diet plays a dominant role in shaping gut microbiota and changing key populations may transform healthy gut microbiota into a disease-inducing entity. For example, the western diet, which is high in sugar and fat, causes dysbiosis affecting both host GI tract metabolism and immune homeostasis<sup>105</sup>. Dysbiosis is a very important term that can be helpful in explaining many pathologies mentioned in Ayurvedic literature.

Thus, an excessive meat/dairy based diet that has been explained by Charak starts its dreadful effect from GI tract leading to metabolic disorders. This can be compared with the theory of agni elaborated by Ayurveda scholars and also explains how wrong food exerts its effect on immune system leading to inflammation at molecular level. Chronic inflammation changes the normal mechanism of body and leads to certain dreadful metabolic disorders. Thus, over and undernutrition both lead to certain metabolic diseases mediated through inflammation<sup>106</sup>.

#### IV. Effect of lifestyle on anabolism

Charak not only explains the adverse effects of bad eating but also explains the ill effects of sedentary behaviour which are the leading cause of metabolic disorders. He explains that those averse to physical or mental activities (exercises), those who are habituated to sleeping during the day and always having the tendency to lying down will end up suffering from various metabolic disorders. Modern researchers have proved this too. Sedentary behaviour refers to low-energy activities that involve energy expenditure (at the level of 1.0–1.5 metabolic equivalent units (METs))<sup>107</sup>, and include

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<sup>102</sup> Pandey Rashmi, Dubey N., Tripathi NS. Ayurvedic Concept of Lifestyle Ailments and its Healing Through Traditional Regimen., 2015, Scholars Journal of Applied Medical Sciences, 3(3H):1599-1601

<sup>103</sup> Kumar Manish, Kividassanavar MB et al. Screening of Serum Insulin in Obese Individual WSR to Sthaulya: An Observational Study. 2016. European Journal of Pharmaceutical and Medical Research, 2016,3(9),638-640

<sup>104</sup> extracts from [http://www.jbsoweb.com/admin/php/uploads/215\\_pdf.pdf](http://www.jbsoweb.com/admin/php/uploads/215_pdf.pdf)

<sup>105</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>106</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>107</sup> May, RC et al. 1996. Glucocorticoids and acidosis stimulate protein and amino acid catabolism in vivo. Kidney Int. 1996 Mar;49(3):679-83.

activities such as lying down, sitting, etc. Individuals could be spending a significant part of their waking hours in sedentary activities<sup>108</sup>.

Per studies by Lee et al (2001), the association between sedentary behaviour and metabolic health could, to some extent, explain the association between sedentary time and metabolic syndrome<sup>109</sup>.

Bedrest studies, though not sufficiently researched in humans, indicate that there is an increased sedentary behavior associated with a range of deleterious metabolic effects<sup>110</sup>.

It can be noted from the above enlisted disorders that kapha dosha, rasa, rakta, mamsa and meda dhatu are vitiated in *santarpaniya* diseases. Therefore, the treatment protocol shall be designed keeping these factors in mind.

**Pramehapidaka:** This can be compared with diabetic carbuncle which is a complication of uncontrolled diabetes mellitus. It is localized infective gangrene of the skin and subcutaneous tissues caused by infection. The predisposing factor is diabetes. In diabetic carbuncle, infection is at hair follicle with severe pain and there is involvement of fibrous strand along with sub-cutaneous tissues. A multi-locular lesion is seen which may give rise to ulcerating carbuncle. In this lesion, gangrenous process can occur which may be due to thrombosis of the lesion.

It is interesting to note that *pramehapidaka*, skin disorders, *pandu* (anaemia), urinary problems (which can be referred to as renal problems) and *arochaka* (anorexia) are all complications of metabolic disorders. These diseases must not be taken as *swatantra* (independent) pathological entities but are to be seen in the light of metabolic disorders.

**Kandu** can be compared with urticaria, characterized by skin eruptions which are reddish and itchy in nature and are of mild intensity and increased by exposure to cold breeze. It is also manifested as a symptom of other diseases. In this context of *santarpanajanya vyadhi*, we have seen previously that certain foods have effect on immune system. *Kandu* is a peculiar indication of severe hyperglycemia as well. Due to dehydration, neuritis and micro angiopathy these types of symptoms can be developed. These are more seen in chronic uncontrolled diabetes patients.

**Kotha**, as explained, is a decay of tissues due to certain conditions. In the context of *santarpanajanya vyadhi*, decay usually is seen in diabetic patients caused mostly due to

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<sup>108</sup> Vaudevan et al. 2011. Textbook of biochemistry for medical students, Sixth Edition, JP Medical Publishers

<sup>109</sup> Parfitt A. 1982 The coupling of bone formation to bone resorption: a critical analysis of the concept and of its relevance to the pathogenesis of osteoporosis. Metab Bone Dis Relat Res 4:1–6.

<sup>110</sup> Mundy G 1989 Local factors in bone remodeling. Rec Prog Horm Res 45:507–531.

microangiopathy. Involvement of the blood vessels by atherosclerosis leading to ischemia is a significant factor in diabetic foot. Lower extremity peripheral vascular disease (PWD) is the most common factor associated with limb ulceration, gangrene, impaired wound healing and ultimately amputation<sup>111</sup>. It mainly occurs due to blood flow changes, occlusive changes, micro angiopathy, and hematological changes. There is marked change in the flow of blood in peripheral vessels. The microcirculation is regulated by neural factors, local reflexes and vasoactive mediators. The initial haemodynamic changes will be increased flow and pressure of capillary blood<sup>112</sup>. As the disease progresses, autoregulation is lost and haemodynamic stress results. It could also be due to increased calcification of vessels or AV shunting or hyperosmolarity of blood. It is well documented by high ankle brachial ratio and also Doppler studies. Occlusive changes occur in more than 50% of diabetics having the disease for more than 10 – 15 years<sup>113</sup>. It mainly affects arteries below profunda femoris and is characterized by multiple segment involvement. The tibial & peroneal arteries between the knee and the ankle are primarily affected. Dorsalis pedis artery and foot vessels are usually spared. Patients with diabetes have diminished ability to establish collateral circulation especially in arteries around knee. This disease is more prevalent & accelerated with diabetes mellitus.

**Pandu** (anemia): It means pallor and is seen in metabolic disorders. Charak has explained it as a disease as well as complication of other disorders. *Pandu* that has been mentioned in *santarpanajanya* diseases chapter is kapha dominant where the causes are elaborated in verses 3 and 4. Two of the most common causes of anemia are due to abnormalities in iron homeostasis: iron-deficiency anemia and anemia of inflammation also known as anemia of chronic disease. The anemia caused due to inflammation is elaborated in this context. It is very interesting to know metabolic disorders like obesity and some complication of diabetes like diabetic nephropathy also lead to pallor and iron deficiency<sup>114</sup>. Along with anaemia, renal parameters also get deranged which may lead to abdominal symptoms like nausea and vomiting, so the word *arochaka* is used here adjoining to *mutrakrichhra* (urinary disorder)<sup>115</sup>. In the latter

<sup>111</sup> Hayward M, Fiedler-Nagy C 1987 Mechanisms of bone loss: rheumatoid arthritis, periodontal disease and osteoporosis. 22:251–254.

<sup>112</sup> Tuominen J, Impivaara O, Puukka P, Ronnenmaa T 1999 Bone mineral density in patients with type 1 and type 2 diabetes. Diabetes Care 22:1196–1200.

<sup>113</sup> Krakauer J, McKenna M, Burderer N, Rao D, Whitehouse F, Parfitt A 1995 Bone loss and bone turnover in diabetes. Diabetes 44:775–782.

<sup>114</sup> Macey L, Kana SM, Jingushi S, Terek RM, Borretos J, Bolander ME 1989 Defects of early fracture-healing in experimental diabetes. J Bone Joint Surg Am 71:722–733.

<sup>115</sup> Gebauer G, Lin S, Beam H, Vieira P, Parsons J 2002 Low-intensity pulsed ultrasound increases the fracture callus strength in diabetic BB Wistar rats but does not affect cellular proliferation. J Orthop Res 20:587–592.

stages of diabetic or hypertensive nephropathy urinary complaints like oligouria or anuria can occur. If it remains untreated due anaemia and congestion in heart, edema starts developing which has been called as *shopha*.

***Amaja vyadhi***: *Ama* is referred to an intermediate bio product of cellular metabolism leading to number of metabolic disorders. Generation of *ama* is thought to start with maldigestion or indigestion of food substances when taken in excess which begins in the stomach. It is a very important factor playing a pivotal role in the genesis of any disease. It is clearly stated that there is no disorder devoid of *ama*. So all the anabolic disorders where *ama* is considered as cause are supposed to be under the category of *ama vyadhis*.

When we think simply about the urinary complaints related with diabetes and obesity, urinary incontinence is prominent symptom, which is dominantly seen in obese women and men, which can be called as stress incontinence. So the word *mutrakkrichra* in this context of *santarpanajanya vyadhis* is to be taken as a complication of diabetic and hypertensive nephropathy.

***Kushtha***: There are many skin diseases which are related to anabolism. Anabolism leads to discoloration and hyperpigmentation of skin. Majority of obese people show severe hyperpigmentation, which is called as acanthosis nigricans. Simple acne can also be the result of *santarpanajanya vyadhis*. Some of the studies<sup>116</sup> had reported, how caloric restriction can change sebum composition. Another study<sup>117</sup> linked acne to the consumption of milk.

***Klaibya***: A person who is unable to have proper sexual intercourse either due to erectile dysfunction or early ejaculation is termed as *klaibya* in Ayurveda. *Klaibya* is described in detail in Chikitsa Sthana [Cha.Sa.Chikitsa Sthana 30/155] and is mentioned as a complication of either obesity, diabetes or hypertension. While elaborating the properties of *lashuna* (garlic) Charak has explained that *lashuna* is important herb in cardiac disorders as well and is useful in *klaibya*. Looking at its properties on microvessels, *garlic* is proven to be a herb which regulates nitric oxide synthesis in the arteries and keeps the lumen of the arteries dilated. Per studies, in cases of hypertensive erectile dysfunction in rats, it has been observed that nitric oxide synthesis

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<sup>116</sup> Barrett-Conner E, Holbrook T 1992 Sex differences in osteoporosis in older adults with non-insulin-dependent diabetes mellitus. JAMA 268:3333–3337.

<sup>117</sup> Loe H 1993 Periodontal disease. The sixth complication of diabetes mellitus. Diabetes Care 16:329–334.

in penile artery is lowered<sup>118</sup>. Garlic has positive impact on regulating nitric oxide synthesis<sup>119</sup>.

The direct effect of obesity on increased risk of erectile dysfunction is well researched, and is often attributable to hormonal imbalance, endothelial dysfunction and insulin resistance.

**Gurugatrata:** *Guru* is heavy and *gatra* is body, and *gurugatrata* means a feeling of heaviness in the body. This condition can be due to excess fat deposition, or may be due peripheral edema developing due to certain cardiac and renal complications. In the initial stage tissues show inflammatory changes at molecular level and later develop symptoms of *gurugatrata*.

**Aalasya**(lethargy or lassitude), at the somatic as well as psychological level, signifies a feeling of lethargy along with hesitancy or weariness of body or mind from strain, oppressive climate, etc. It is mainly caused due to psychological factors that show through one's sensory and motor organs. It is a primary stage of the major complications like *tandra* and *moha*. It could also be a condition symptomatic of diabetic and hypertensive cerebral encephalopathy. Uncontrolled hyperglycemia or hypertension in patients may lead to number of complications. These are all pre coma or coma conditions where all the sensory organs stop responding and a specific word, *Lepa*, is used to denote some form of "covering" that the sensory organs are covered with that makes them stop responding and lose orientation. Not only the sensory organs, but all the body channels from where not only the blood and sensation, but also the chemical signalling of the cells also gets disturbed and patients land into *tandra*, *buddhi moha* and *pameelaka*.

**Tandra** is an abnormal condition characterized by drowsiness.

**Moha** is an abnormal condition of the mind in which person cannot take correct decision and also is not able to scrutinize the subject referred by mind.

**Pameelaka:** An abnormal mental condition characterized by constant thoughts.

All the above mentioned conditions are due to severe hyperglycemia with hyperosmolality and dehydration, in the absence of significant ketosis. It occurs in patients with mild or occult diabetes, and most patients are middle-aged to elderly. Accurate figures are not available as to its true incidence, but from data on hospital discharges it is rarer than diabetic ketoacidosis even in older age groups.

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<sup>118</sup> Nelson R, Shlossman M, Budding L, Pettitt DJ, Saad MF, Genco RJ, Knowler WC1990 Periodontal disease and NIDDM in Pima Indians. Diabetes Care 13:836–840.

<sup>119</sup> <https://www.slideshare.net/sprince33/glomerulonephritis> accessed on 12 June 2017

Research shows that a partial or relative insulin deficiency may trigger a syndrome by reducing glucose utilization of muscle, fat, and liver while increasing hepatic glucose output<sup>120</sup>.

Ultimately, with all these symptoms and conditions, edema over the body develops and along with other complications lands the patient into severe difficulties.

**Lekhana** is defined as the therapeutic action which (adequately) dries up body tissues and then literally scrapes the unwanted substances (generally solid, unctuous substances) out from the body tissues. Though this may be one meaning of *lekhana*, all *lekhana* activites and *lekhana dravya* exert some pharmacological activates that reduce unwanted substances - unwanted dosha, dhatu or mala- from the body. The same properties of *lekhana* can be achieved by virechana, vamana or raktamokshana.

Exercise and fasting has a very positive effect on anabolic disorders. Exercise results in reduction in fasting blood glucose, which replicates previous beneficial effects of exercise interventions in type II diabetes<sup>121</sup>.

## Fasting

That fasting and CR (calorie restriction) makes an organism's metabolic process more efficient, enhancing the organism's age, is a well-researched subject. Clive McCay at Cornell had published, in 1937, that a 33% caloric restriction resulted in a 50% increase in the maximum lifespan of a rat. Similar experiments were done on organisms such as yeasts, mosquitoes, flies, protozoa, roundworms, fish, etc. Many decades later, the National Institute of Aging (NIA) and the universities of Maryland and Wisconsin tried to study the impact of CR on aging using primates (squirrel and rhesus monkeys). The NIA Primate CR study indicated that CR monkeys "demonstrated an improved metabolic profile", though they also concluded that the effects of CR in long-lived animals are complex and depend on a variety of factors besides caloric restriction<sup>122</sup>.

## Herbs used in management of *santarpanajanya* diseases

While treating *santarpanajanya vyadhis* like *sthulata* (obesity) and *madhumeha* (diabetes), consumption of *dravyas* that have *guru* and *ruksha* properties is advised. Along with medicines, the diet must also be *ruksha*. For skin ailments, applying powders of medicinal plants all over the body which can provide relief from *kandu* (itching) and

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<sup>120</sup>

<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

<sup>121</sup>

<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

<sup>122</sup> Hampton T. Studies probe oral health diabetes link. JAMA 2008; 300:2471-2473.

*kotha* (pre-gangrenous condition) are advised. So the food must be *guru* and *apatarpana*, i.e., it should induce catabolic activities. Applying these powders on the lesions may improve blood circulation which may consequently improve the increased hydroxylysine and glucose disaccharide content, decrease in proteoglycan and heparin sulfate and decrease in lysine content towards the lesion. The effects of honey, a food rich in antioxidants, on diseases such as cancer, coronary diseases, inflammatory disorders, and aging, has helped it gain lot of attention among nutritionists<sup>123</sup>. Properties of honey are *ruksha*, *guru*, and *kashaya*. Food and medicine having these properties enhance *akash*a and *vayu mahabhuta* which tends the person towards *apatarpana*.

Since *ruksha dravyas* are *akash*a and *vayu* dominant, medicines and food articles of this property are advised. Of the three properties of honey, the most important one is *guru*. Since *jatharagni* is vitiated in obesity (since agni plays an important role in causing or aggravating anabolic disorders), *guru* and *ruksha* substances are used to pacify it, and thus honey is recommended for obesity. However, the use of honey in diabetes is controversial since honey is full of fructose and it imparts hyperglycaemic properties on diabetic patients. In diseases like obesity, lipid abnormality and diabetes mellitus, gut microbiota plays an important role in carbohydrate metabolism.

Pericarp of *haritaki* showed cardiotonic activities in frog hearts, increasing the force of contraction and cardiac output without altering the heart rate<sup>124</sup>. *Haritaki* extracts administered before initiating any treatment showed signs of reduced myocardial damage caused by isoproterenol in rats. *Haritaki* reduced lipid peroxidation and significantly reduced cholesterolemia, aortic sudanophilia, and cholesterol content of the aorta and liver<sup>125</sup>.

Local application by rubbing of certain herbal powders on the skin reduces kapha dosha and regulates vata dosha at that level and inhibits samprapti of *kandu* and *kotha*. Regular rubbing of the powders over the skin increases peripheral circulation of the capillaries supplying the skin and also reduced inflammation at dermal level. Rubbing of dry powders over the body is called *udvartana*. This softens the skin leaving it with a lustrous glow. The stimulating massage helps revitalize skin, removes fat deposits and improve circulation and digestion. *Udvartana* helps open the circulatory channels, facilitating metabolic activities, eliminating excessive perspiration and body odor and improving the complexion of the skin.

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<sup>123</sup> <http://press.endocrine.org/doi/10.1210/jcem.86.3.7304> accessed on 12 June 2017

<sup>124</sup> Goldberg J.Ira . Diabetic Dyslipidemia: Causes and Consequences .The Journal of Clinical Endocrinology & Metabolism. 2001. 86 (3): 965-971.

<sup>125</sup>

[http://doctor.ndtv.com/faq/ndtv/fid/8091/What\\_is\\_the\\_cause\\_for\\_white\\_cloudy\\_urine.html](http://doctor.ndtv.com/faq/ndtv/fid/8091/What_is_the_cause_for_white_cloudy_urine.html) accessed on 12 June 2016

***Triphala*** is one of the oldest used polyherbal preparations. It is comprised of Terminalia chebula, Terminalia bellerica and Emblica officinalis. Some of the positive qualities of *triphala* in-vivo and in-vitro are that it is an antioxidant, anti-hypercholesterolemic, anti-diabetic, anti-obesity, and possesses chemo-preventive potential and anti-mutagenic activities, anti-inflammatory, antimicrobial, radioprotective effect, immunomodulatory, improving wound healing, enteroprotective efficacies, anti-gastric ulcers and nitric oxide scavenging properties. This herbal combination can have profound healing benefits in multi-organ systems. It is rich in Mg, K, Ca, Fe, Se and Zn, which enhance their bioavailability. Low molecular weight tannins, gallic acid and other important phytochemicals are responsible for the above effects<sup>126</sup>.

***Aragwadha*** (*Cassia fistula*) possesses *madhura rasa*, *madhura vipaka* and has *sheeta veerya*. It possesses strong antioxidant properties. Aqueous extract of *Aragwadha* flowers administered in diabetic rats (streptozotocin induced diabetes) showed antioxidant effect. After investigating antioxidants marker enzymes in the brain, significant increase is observed, with decrease in thiobarbituric reactive substances and hydroperoxide formation comparable with glibenclamide<sup>127</sup>.

*Cassia auriculata* L. seedlings, if irradiated with ultraviolet B (UV-B), it counteracted the induced oxidative stress with reduction in ascorbate, dehydroascorbate, glutathione/oxidized glutathione content at two doses assayed (7.5 and 15.0 kJ-2)<sup>128</sup>

Ethanic and methanolic extracts of the flowers showed antioxidant properties which may be due to presence of flavonoids and tannins<sup>129 130</sup>. , *Patha* (*cissampelos pareira*): Certain controversies are there about *patha*. Two different herbs are used as *patha* in different part of India- *Cyclea peltata* and *Cissampelos parietal*. Properties of *patha* are elaborated as *rasa-tikta virya-usna vipaka-katu guna.-laghu, tiksna karma-vata-kaphahara, visaghna ,grahi, balya*. *Patha* is known to have potent diuretic properties. Certain flavonoids were found to exert their diuretic properties by binding with Adenosine A1 Receptor associated with the diuretic action. The diuretic properties

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<sup>126</sup> <http://ehealthforum.com/health/topic35228.html> accessed on 12 June 2016

<sup>127</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

<sup>128</sup> <https://answers.yahoo.com/question/index?qid=20100106090425AACh3og> accessed on 12 June 2016

<sup>129</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

<sup>130</sup> Zargar BA, Masoodi MH, Ahmed B, Ganie SA. Phytoconstituents and therapeutic uses of *Rheum emodi* wall. ex Meissn. *Food Chem.* 2011;128(3):585-589.  
doi:10.1016/j.foodchem.2011.03.083

of studied plant may be through any of these possible mechanisms since it is rich in alkaloids and flavonoids<sup>131</sup>.

**Saptaparna** (*Alstonia scholaris*) possess *tikta kashaya rasa*, *ushna veerya* and *katu vipaka*. The bark is useful in malarial fevers, abdominal disorders, dyspepsia and in skin diseases. In Ayurveda, it is reported that the bark of the plant when soaked in water overnight, can reduce the blood glucose level after oral administration. However, not much characterization of this properties has been done on a scientific basis. The phytochemicals are indicative of its potential in the treatment of diabetes mellitus<sup>132</sup>.

In one of the studies of *saptaparna* (*Alstonia scholaris*) showed decrease in glycogen content in streptozotocin-diabetic rats support the findings of Grover et al. The decrease in glycogen content may result due to disturbances in glycogen synthetase system. Improvement in liver glycogen of diabetic rats after chronic treatment with aqueous extract of *Alstonia scholaris* L. bark indicates that possible way of antidiabetic effect of the extract may be by improvement of glycogenesis and / or suppression of glycogenolysis. Thus, study showed that bark of *Alstonia scholaris* L. possesses antidiabetic and antihyperlipidemic effects in STZ diabetic rats. The antiatherogenic potential of the bark extract indicates its usefulness not only in diabetes mellitus but also in the long term complications associated with it<sup>133</sup>.

*Cyperus rotundus* has antioxidant and anti-atherosclerotic effects due to the presence of flavanoids, polyphenols and terpenes which reduce absorption of total cholesterol and triglycerides. *Cyperus rotundus*, in the form of a fine powder or an aqueous solution, exhibits lipolytic properties and showed mobilization of fats from adipose tissues. *Cyperus rotundus* is supposed to have activators of beta adreno receptors<sup>134</sup>.

**Madanaphala** (*Randia dumetorum*) has *madhura*, *tikta rasa*, *katu vipaka* and *ushna veerya*. It is a widely used herb for induction of vomiting used for vamana procedure. It has *lekhana* properties.

Clearly, the pharmacological action of the above *dravyas* all have been proven to have anti-diabetic and anti-hyperlipidimic properties. The interesting thing to note is that

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<sup>131</sup> Sodini I, Morin P, Olabi A, Jiménez-Flores R. Compositional and functional properties of buttermilk: a comparison between sweet, sour, and whey buttermilk. J Dairy Sci. 2006 Feb;89(2):525-36. doi: 10.3168/jds.S0022-0302(06)72115-4. PMID: 16428621.

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<sup>133</sup> Rajesmita B, Keshavamurthy V. Re-discovering Sandalwood: Beyond Beauty and Fragrance. Indian Dermatol Online J. 2019;10(3):296-297.  
doi:10.4103/idoj.IDOJ\_357\_18

<sup>134</sup> Shah G, Shri R, Panchal V, Sharma N, Singh B, Mann AS. Scientific basis for the therapeutic use of *Cymbopogon citratus*, staph (Lemon grass). J Adv Pharm Technol Res. 2011;2(1):3-8. doi:10.4103/2231-4040.79796

although these *dravyas* ultimately work for metabolic disorders, they have different modes of action. Anti-diabetic properties of *triphalā*, *neem*, *musta* and *saptaparna* are different. The *rasa* of the above mentioned *dravyas* is *tikta kasahaya* or *tikta katu* which is *akashā*, *teja* and *vayu* mahabhuta dominant. As we have seen that *santarpaniya vyadhis* are due to excess consumption of *Prithvi* and *jala* mahabhuta those of opposing properties, i.e., *akashā*, *teja* and *vayu* are used in treating such ailments.

**Devadaru** (*Cedrus deodara* or Himalayan Cedar) is a herb that is very effective in improving the functions of liver and in maintaining cholesterol levels in healthy limits. *Devadaru* pacifies the *kapha dosha* by *tikta*, *katu* and *ushna* properties, and *vata dosha* by *snigdha* and *ushna* properties so it is useful in disorders induced by *kapha* and *vata* dosha.

Investigation demonstrate that extracts of *C. deodara* shows reduction in body weight in treated groups in a dose dependent manner. The major chemical constituents of *C. deodara* are sterols, poly-phenols, flavanoids such as taxifolin, quercetin and saponins<sup>135</sup>. It is well established that saponins are useful in treatment of obesity<sup>136</sup>. Phytosterols have beneficial effects on hyperlipidemia<sup>137</sup> and poly-phenols and flavanoids have potential antioxidant properties. Therefore, it could be possible that presence of these compounds is responsible for observed glucose and lipid lowering properties.

**Shwadanshtra** or *gokshura* (*Tribulus Terrestris*) is *madhura rasatmaka* and has *sheetā veerya* with *madhura vipaka*. *Gokshura* is widely used to relieve certain anabolic disorders. It is helpful for the treatment of angina<sup>138</sup>, high cholesterol 65, diabetes 65, and muscle spasms<sup>139</sup>, and for the prevention of kidney stones<sup>140</sup>.

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<sup>135</sup> Pastorino G, Cornara L, Soares S, Rodrigues F, Oliveira MBPP. Liquorice (*Glycyrrhiza glabra*): A phytochemical and pharmacological review. *Phytother Res*. 2018;32(12):2323-2339. doi:10.1002/ptr.6178

<sup>136</sup> Chakrapanidatta, Cakradatta (*Chikitsasangraha*). Edited by Priya Vrat Sharma. 3rd ed. Varanasi: Chaukhamba publishers; 2002

<sup>137</sup>

<sup>138</sup> Li M, Qu W, Chu S, et al. Effect of the decoction of *Tribulus terrestris* on mice gluconeogenesis. *Zhong Yao Cai*. 2001;24:586-588.

<sup>139</sup> Arcasoy HB, Erenmemisoglu A, Tekol Y, et al. Effect of *Tribulus terrestris* L. saponin mixture on some smooth muscle preparations: a preliminary study. *Boll Chim Farm*. 1998;137:473-475.

<sup>140</sup> Sangeeta D, Sidhu H, Thind SK, et al. Effect of *Tribulus terrestris* on oxalate metabolism in rats. *J Ethnopharmacol*. 1994;44:61-66.

It is very interesting to note that though *gokshura* or *Tribulus terrestris* is *madhura* and *sheeta veerya dravya* it has been included to treat *santarpaniya vyadhis*. *Gokshura*, by the virtue of its phytochemicals and its DHEAS (Dihydro epi andesterone sulphate) stimulating property and its potent diuretic qualities may have been in the group of medicines which are used to impart *apatarpana*. It has proved to be a very potent herb to cure erectile dysfunction and *klaibyata* in patients suffering from metabolic syndrome.

**Khadira** (*Acacia Catechu*): This herb is *tikta*, *kashaya* having *sheeta veerya* and *katu vipaka*. This herb is mostly used as *kusthaghana* to alleviate skin problems. In eastern traditional medicines, *Acacia catechu* Willd is extensively used in the management of diabetes in combinations with other medicinal plants. The most common chemical classes among these plants are flavonoid and other anti-oxidants. Hypoglycemic property of extract of *Acacia catechu* Willd is assumed to be due to the presence of flavonoids which also show inhibition of cyclo-oxygenase and regenerate $\beta$  cells<sup>141</sup>. In vitro *Acacia catechu* Willd is reported to have broad spectrum anti-microbial and anti fungal properties. Phytochemical studies of *Acacia catechu* Willd leaves shows the presence of alkaloids, carbohydrates, flavones, glycosides, phenolic compounds, saponins, steroids and tannins which may be responsible for its anti-microbial properties<sup>142</sup>.

**Haridra** (*Curcuma longa*) has *tikta rasa*, *katu vipaka* and *ushna veerya*. It is *laghu ruksha* in its qualities. Ingestion of 6 gm *Curcuma longa* increased postprandial serum insulin levels, but did not seem to affect plasma glucose levels or GI, in healthy subjects. The results indicate that *Curcuma longa* may have an effect on insulin secretion. The active principles in the rhizome of turmeric plant viz; curcuminoids lower lipid peroxidation by maintaining the activities of antioxidant enzymes like super oxide dismutase, catalase and glutathione per oxidase at higher levels. Antioxidant properties of *curcuma longa* is due to curcumin and its three derivatives (demethoxy curcumin, bisdemethoxy curcumin and diacetyl curcumin)<sup>143</sup>. A scientific and systemic exploration reveals antidiabetic, hypolipidemic and hepatoprotective effects of *Curcuma longa*

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<sup>141</sup> Jarald, E., Joshi, SB., and Jain, DC., (2009). Studies shows that Myricetin, Quercetin and Catechin-gallate inhibit insulin stimulated glucose transporters in isolated adipocytes of rats (Strobel, P., Allard, C., Perez-Acle, T., Calderon, R., Aldunate, R., and Leighton, F., 2005)

<sup>142</sup> A review on *Acacia catechu* Willd Muhammad Anis Hashmat, Rabia Hussain Interdisciplinary journal of contemporary research in business may 2013 vol 5, no 1

<sup>143</sup> Wickenberg J, Ingemansson S, Hlebowicz J (2010) Effects of *Curcuma longa* (turmeric) on postprandial plasma glucose and insulin in healthy subjects. Nutr J 9: 43

freeze dried rhizome powder dissolved in milk which could be used as an effective and safe antidiabetic dietary supplement of high potential<sup>144</sup>.

*Curcuma longa* is known to contain curcuminoids, glycosides, terpenoids, and flavonoids. Maximal inhibition of the enzyme Human Pancreatic Amylase (HPA) was obtained with *Curcuma longa* isopropanol extract and acetone extract. This inhibitory action on HPA causes reduction in starch hydrolysis leading to lowered glucose levels<sup>145</sup>. The antioxidants in turmeric also prevent damage to cholesterol, thereby helping to protect against atherosclerosis. In fact, the ability of the antioxidants in turmeric to decrease free radicals is similar to that in vitamins C and E. Since the antioxidant activities of turmeric are not degraded by heat, even using the spice in cooking provides benefits. Animal studies show that curcumin lowers cholesterol and triglycerides, another fat that circulates in the blood stream and is a risk factor for cardiovascular disease. In a recent study of atherosclerosis, mice were fed a standard American diet, rich in refined carbohydrates and saturated fat, but low in fiber. Some of the mice, however, received this diet plus turmeric mixed in with their food. After four months on these diets, the mice that consumed the turmeric with their food had 20 percent less blockage of the arteries than the mice fed the diet without the turmeric. In another study, rabbits were fed turmeric plus a diet designed to cause atherosclerosis. Several risk factors for the disease were improved, including a decrease in cholesterol, triglycerides, and free-radical damage.

**Antidermatophytic properties:** Fresh juice of rhizome of *haridra* is used as an antiparasitic in many skin disorders. Its rhizome powder mixed with cow's urine is taken internally in itching and dermatitis. *Curcuma longa* L. leaves have good promise as an antifungal agent that could be used as a therapeutic remedy against human pathogenic fungi on account of its various in vitro and in vivo antifungal properties, viz., strong fungicidal action, long shelf-life, its tolerability of heavy inoculum density, thermo stability, broad range of antidermatophytic properties and absence of any adverse effects. Curcumin obtained from the turmeric rhizome have shown to possess the ability to protect the skin from harmful UV-induced effects by displaying antimutagen, antioxidant, free radical scavenging, anti-inflammatory and anti-carcinogenic properties<sup>146</sup>.

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<sup>144</sup> Rai PK, Jaiswal D, Mehta S, Rai DK, Sharma B, et al. (2010) Effect of curcuma longa freeze dried rhizome powder with milk in stz Induced diabetic rats. Indian J Clin Biochem 25: 175-181

<sup>145</sup> Ponnusamy S, Ravindran R, Zinjarde S, Bhargava S, Ameeta R (2011) Evaluation of Traditional Indian Antidiabetic Medicinal Plants for Human Pancreatic Amylase Inhibitory Effect In Vitro Evidence-Based.Complementary and Alternative Medicine 10.

<sup>146</sup> Binic I, Lazarevic V, Ljubenovic M, Mojsa J, Sokolovic D (2013) Skin Ageing: Natural Weapons and Strategies. Evid Based Complement Alternat Med.

**Neem** (*Azadirachta indica*): It is a *tikta rasa* plant having *sheeta veerya* and *katu vipaka*. It imparts *ruksha* and *laghu* property. Hydroalcoholic extracts of this plant showed anti-hyperglycemic properties in streptozotocin treated rats and this effect is because of increase in glucose uptake and glycogen deposition in isolated rat hemidiaphragm<sup>147</sup>. Apart from having anti-diabetic properties, this plant also has anti-bacterial, antimalarial, antifertility, hepatoprotective and antioxidant effects<sup>148</sup>.

**Twak** (*Cinnamomum Zelyanicum*): It is *katu-tikta rasatmaka* having *katu vipaka* and *ushna veerya*. It has been shown that oral administration of cinnamaldehyde produces significant antihyperglycemic effect lowers both total cholesterol and triglyceride levels and, at the same time, increases HDL-cholesterol in STZ induced diabetic rats<sup>149</sup>.

Matan et al. have reported antimicrobial properties of Cinnamon bark. The volatile gas phase of combinations of Cinnamon oil and clove oil showed good potential to inhibit growth of spoilage fungi, yeast and bacteria normally found on IMF (Intermediate Moisture Foods) when combined with a modified atmosphere comprising a high concentration of CO<sub>2</sub> (40%) and low concentration of O<sub>2</sub> (<0.05%). A. *flavus*, which is known to produce toxins, was found to be the most resistant microorganism<sup>150</sup>.

**Kushtha** (*Saussurea Lappa*): has *tikta katu madhur rasa*, *katu vipaka* and *ushna veerya*. It is known to lower blood lipids and is also known to improve coronary circulation<sup>151</sup>.

**Barley:** Barley contains greater amounts of soluble and non-soluble starches compared to other cereals, and approximately 17% of the carbohydrate in barley is not absorbed. Undigested carbohydrate produces short chain fatty acids, some which may reduce hepatic glucose production and affect postprandial glycemia. Barley also inhibits serum cholesterol and is also known to reduce blood pressure if given for long term use<sup>152</sup>.

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<sup>147</sup> Chattopadhyay R.R., Chattopadhyay R.N., Nandy A.K., Poddar G., Maitra S.K. Preliminary report on antihyperglycemic effect of fraction of fresh leaves of *Azadiracta indica* (Beng neem) Bull. Calcutta. Sch. Trop. Med. 1987;35:29–33.

<sup>148</sup> Biswas K., Chattopadhyay I., Banerjee R.K., Bandyopadhyay U. Biological activities and medicinal properties of neem (*Azadiracta indica*) Curr. Sci. 2002;82:1336–1345.

<sup>149</sup> Subash Babu P, Prabuseenivasan S, Ignacimuthu S. Phytomedicine, 2007;14:15–22

<sup>150</sup> Matan N, Rimkeeree H, Mawson A J, Chompreda P et al. International Journal of Food Microbiology, 2006;107:180–185

<sup>151</sup> Study of kustha (, clarke) in ischaemic heart disease Anc Sci Lifev.13(1-2); Jul-Dec 93PMC3336543

<sup>152</sup> Thorburn, A., Muir, J., and Proietto, J. Carbohydrate fermentation decreases hepatic glucose output in healthy subjects. Metabolism1993;42(6):780-785. 8510524

**Hingu**(*Ferula asafoetida*): is a resin having *katu rasa*, *ushna veerya* and *katu vipaka*. *Ferula asafoetida* exhibits anti-cholesterol anti-hypertensive<sup>153</sup> and a potent anti-oxidant properties in experimental animals<sup>154</sup>.

**Vasa** (*Adhatoda vasica*): has *tikta rasa*, *sheeta veerya* and *sheeta vipaka* and is strong anti diabetic and cardio protective<sup>155</sup>.

**Kharavha ajmoda** (*Trachyspermum ammi*): is a plant with *katu*, *tikta rasa*, *katu vipaka* and *ushna veerya*. *T. ammi* has been shown to possess antimicrobial, hypolipidaemic, digestive stimulant, antihypertensive, hepatoprotective, antispasmodic and broncho-dilating properties<sup>156</sup>.

**Pashanabhesha** (*Bergenia ligulata*): has *katu tikta rasa*, *katu vipaka* and *ushna veerya*. It is a controversial herb and many other plants under the name *pashanabhesha* are prescribed and used. *Pashanabhesha* is enlisted in *mootra virechaniya mahakashaya*. Due to its diuretic property, it can be used in hypertension, congestive cardiac failure, renal complains etc<sup>157</sup>.

Apart from its diuretic properties, *pashanabhesha* exhibits good anti-diabetic properties. The 80% ethanolic extract of *pashanabhesha* rhizome was fractionated to investigate for α-glucosidase or anti-diabetic properties. Sample solution were evaluated at dose levels of 5.0, 0.5, 0.05 mg/ml to obtain dose response. The ethyl acetate extract exhibited an inhibitory effect of α-glucosidase properties<sup>158</sup>.

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<sup>153</sup> Sarkisyan RG. Effect of Ferula on arterial pressure. Meditsinskii Zhurnal Uzbekistana. 1969;1969:23–4. Sambaiah K, Srinivasan K. Influence of spices and spice principles on hepatic mixed function oxygenase system in rats. Indian J Biochem Biophys. 1989;26:254–8. [PubMed]

<sup>154</sup> Sambaiah K, Srinivasan K. Influence of spices and spice principles on hepatic mixed function oxygenase system in rats. Indian J Biochem Biophys. 1989;26:254–8. [PubMed]

<sup>155</sup> Atal CK. Chemistry and pharmacology of vasicine. Indian drugs 1980 15(2) 15-18

<sup>156</sup> Bairwa Ranjan, Singhal Manmohan, Sodha Ravindra Singh and Rajawat Balwant Singh (2011). Medicinal Uses of *Trachyspermum Ammi*: A Review, The Pharma Research, 5(2): 247-258

<sup>157</sup> Nagaratna, A Clinico-Experimental Study of Two Sources of Pashanabhesha and *Bryophyllum Pinnatum* with respect to Mootrila Karma, 2012. Rajiv Gandhi University of Health Sciences, Bangalore

<sup>158</sup> Youshikawa M, Nishida N, Shimoda H, Takada M, Kawahara Y, Matsuda. Polyphenol constituents from *Salacia* species: quantitative analysis of mangiferin with alpha-glucosidase and aldose reductase inhibitory activities. Yakugaku Zasshi, 1231, 2001, 371-378.

**Takra** (butter milk) is used to relieve *santarpanajanya vyadhis*. It has prime importance in diet and is supposed to be improve appetite. Its properties and medicinal qualities are described in Ashtanga Hridaya Sutra Sthana chapter 5.

**Trikatu**: is combination of equal parts of *sunthi*, *maricha* and *pippali*. *Trikatu* is regarded as an anti-obesity formulation and has been widely used in anabolic disorders. It is widely used to lower cholesterol and triglycerides and is known to increase HDL levels. In one of the studies it is found that *trikatu*, by virtue of its ability to reduce triglycerides and LDL cholesterol, increases HDL cholesterol to reduce the risk of hyperlipidaemia and atherosclerosis.<sup>159</sup> *Trikatu* is also known to have immune modulatory properties<sup>160</sup> and is known to be a good bioavailability enhancer<sup>161</sup>.

**Vidanga** (*Embelia ribes*): The properties are *rasa katu*, *kashaya rasa*, *ushna veerya* and *katu vipaka*. It is one of the important plants used for relieving worm infestation. *Vidanga* exhibits a potent hypoglycaemic and lipid lowering properties<sup>162</sup>.

**Agaru** (*Aquilaria agallocha*): *Agaru* is a tropical and sub-tropical, fragrant evergreen tree. The wood is very heavy, and sinks in water. The wood has *tikta rasa*, *ushna veerya* and *katu vipaka*. It exerts potent immunomodulator and anti inflammatory property<sup>163</sup>.

**Sunthi** or ginger (*Zinziber officinale*): Ginger has *katu rasa*, *madhura vipaka* and *ushna veerya*. Ginger has been shown to exhibit antioxidant effects. (6)-gingerol appears to be the antioxidant constituent present in ginger, as it was shown to protect HL-60 cells from oxidative stress. Ginger oil has dominative protective effects on DNA damage induced by H<sub>2</sub>O<sub>2</sub>. Ginger oil might act as a scavenger of oxygen radical and might be used as

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<sup>159</sup> Effect of an indigenous herbal compound preparation ‘Trikatu’ on the lipid profiles of atherogenic diet and standard diet fed Rattus norvegicus Valsala Sivakumar1, Phytotherapy Research Volume 18, Issue 12, pages 976–981, December 2004.

<sup>160</sup> Trikatu, an herbal compound as immunomodulatory and anti-inflammatory agent in the treatment of rheumatoid arthritis-an experimental study Vachana Murunikkara, MahaboobKhan RasoolCellular ImmunologyAvailable online 18 December 2013

<sup>161</sup> Effect of trikatu (PIPERINE) on the pharmacokinetic profile of isoniazid in rabbitsRS Karan, VK Bhargava, SK Garg Year : 1998 , Volume : 30 , Issue : 4 , Page : 254-256.

<sup>162</sup> Effect of Ethanolic Extract of *Embelia ribes* on Dyslipidemia in Diabetic RatsUma Bhandari, Raman Kanojia, and K. K. Pillai Int. Jnl. Experimental Diab. Res., 3:159–162, 2002

<sup>163</sup> Anti-inflammatory effects and immunomodulatory mechanism of *aquilaria agallocha* Y.-c. Mao1 , h.-y. Hsu2, y.-h. Chiu2 department of laboratory medicine and biotechnology, department of life science, tzu chi university, hualien, taiwan

an antioxidant<sup>164</sup>. In vitro research indicates that gingerols and the related shogaols exhibit cardio depressant properties at low doses and cardiotonic properties at higher doses. Both (6)-shogaol and (6)-gingerol, and the gingerdiones, are reportedly potent enzymatic inhibitors of prostaglandin, thromboxane, and leukotriene biosynthesis.<sup>165</sup> Spiced foods or herbal drinks, containing ginger, have the potential to produce significant effects on metabolic targets, such as satiety, thermogenesis, and fat oxidation thus, useful as anti-obesity agent. Thermogenic ingredients, such as ginger, may be considered as functional agent that could help restore a “positive energy balance” and prevent obesity<sup>166</sup>.

**Shigru** (*Moringa olifera*): has properties of *katu*, *kashaya rasa*, *ushna veerya* and *katu vipaka*. It is widely used in *santarpaniya vyadhis*. Charak has also elaborated *shigru* to be used in obesity and heart diseases. It exhibits strong hypoglycaemic properties.<sup>167</sup> The aqueous, ethanol and ether extracts of *moringa oleifera* leaves contain compounds that cause reduction in heart rate and relaxation of cardiac muscle and have medical use in management of cardiac conditions like hypertension<sup>168</sup>.

**Katukrohini** or **kutaki** (*Picrorrhiza kurroa*): *Kutaki* has *tikta rasa*, *katu vipaka* and *sheeta veerya*. It possesses a strong hepatoprotective properties due to phytochemical picroliv and also have a potent antioxidant properties<sup>169</sup>. It is found to be effective against CCl4 induced hepatic damage in rats, by reversal of increased serum level of SGOT, SGPT, ALP, Cholesterol, Bilirubin and decreases level of total protein which occurs during hepatotoxicit<sup>170</sup>.

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<sup>164</sup> Ma J, Jin X, Yang L and Liu ZL. Diarylheptanoids from the rhizomes of *Zingiber officinale*. *Phytochemistry*. 2004;65(8):1137-1143..24

<sup>165</sup> Shoji N, Iwasa A, Takemoto T, Ishida Y and Ohizumi Y. Cardiotonic principles of ginger (*Zingiber officinale* Roscoe).

<sup>166</sup> Westerterp-Plantenga M, Diepvens K, Joosen AM, Berube-Parent S and Tremblay A. Metabolic effects of spices, teas, and caffeine. *Physiol Behav*. 8-30-2006;89(1):85-91.

<sup>167</sup> Effect of *Moringa oleifera* Lam. leaves aqueous extract therapy on hyperglycemic rats Dolly Jaiswal, Prashant Kumar Rai, Amit Kumar, Shikha Mehta, Geeta Watal. *Journal of Ethnopharmacology* 123 (2009) 392–396

<sup>168</sup> Effect of *moringa oleifera* leaf extracts on the isolated rabbit heart and uterus Ntulume, R. Davis URI: <http://hdl.handle.net/10570/308> Date: 2010-11.

<sup>169</sup> Phytochemical and Pharmacological Standardisation of Polyherbal Tablets For Hepatoprotective Activity Against Carbon Tetrachloride

<sup>170</sup> Induced Hepatotoxicity Vilas A. Arsul\*, R. O. Ganjiwale, P. G. Yeole International Journal of Pharmaceutical Sciences and Drug Research 2010; 2(4): 265-268

**Brihati** (*Solanum indicum*): *Brihati* has *katu tikta rasa*, *katu vipaka* and *ushna veerya*. *Solanum indicum* Linn. fruits have laxative and cardiotonic action<sup>171</sup>.

**Ativisha** (*Aconitum heterophyllum*): has *tikta katu rasa*, *katu vipaka* and *ushna veerya*. It is *laghu* and *ruksha* and hence is used in *santarpaniya vyadhis*. Research showed significant reduction in total cholesterol, TG, apolipoprotein B and increase HDL cholesterol and apolipoprotein A in serum samples and HMG CO A properties in liver samples. Properties of LCAT had increased and also there was increased fecal fat excretion. The mechanism explained for hypolipidemic properties was due to inhibition of HMG COA reductase properties and decrease fat absorption from intestine<sup>172</sup>.

**Sthiram** (*Shliparni desmodium gangeticum*): It has *madhura*, *tikta rasa*, *madhur vipaka* and *ushna veerya*. It has alkaloids, pterocarpans, phospholipids, sterols, flavones and flavonoid glycosides. The plant shows many pharmacological activities like anti-inflammatory, anti-nociceptive, analgesic, anti-amnesic, anti-diabetic, anti-oxidant, anti-ulcer, and better CVS activites, CNS depressant, antibacterial, wound healing, antipyretic and several miscellaneous actions<sup>173</sup>.

**Kebukmool** (*Costus speciosus*): It has *tikta kashaya rasa*, *katu vipaka* and *sheeta veerya* and has strong diuretic action. Increased excretion of Na<sup>+</sup> and Cl is observed after its administration. It is known to relieve pulmonary edema<sup>174</sup>.

**Dhanayaka** (*Coriander sativum*): *Dhanayaka* has *katu*, *tikta* and *madhur rasa* with *katu vipaka* and *sheeta veerya*. It possesses potent diuretic and antioxidant properties. Part of seeds shows a significant hypolipidemic action. There was significant increase in β-hydroxy, β-methyl glutaryl CoA reductase and plasma lecithin cholesterol acyl transferase properties (LCAT) were noted in the experimental group. The level of low density lipoprotein (LDL), very low density lipoprotein (VLDL) cholesterol decreased while that of high density lipoprotein (HDL) cholesterol increased in the experimental

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<sup>171</sup> Evaluation of laxative and cardiotonic activity of solanum indicum linn. Fruits Prashanta Kumar Deb Journal of Pharmacy and Phytotherapeutics J Pharm Phytother 2013, 1:3, 11 – 14

<sup>172</sup> Arun Koorapally subash, Anu Augustine, Hypo lipidemic effect of methnol fraction of *Aconitum heterophyllum* wall ex Royle and the mechanism of action in diet induced obese rats. J.Adv.Pharm. Tech. Res, vol.8, (issue 4):oct-dec ,(2012).

<sup>173</sup> Pharmacological activities of desmodium gangeticum: an Overview Bhavesh Vaghela\*, sandip buddhadevleena shukla an international journal of pharmaceutical sciences 08 Vol - 4, issue - 4, jul-sept 2013 issn: 0976-7908

<sup>174</sup> International journal of Ayurveda and Pharmacy Dubey S et al 2012 1(2)648-652

group. Besides diuretic properties it also exhibits a strong anti diabetic and anti convulsant action<sup>175</sup>.

**Chitraka** (*plumbago zeylanica*): has *katu rasa*, *katu vipaka* and *ushna veerya*. It is one of the famous herbal medicine used for *agnimandya*. It also has antidiabetic and hypocholesterolemic action. Pharmacological studies carried out by researchers have indicated that *plumbago zeylanica* has antihyperglycemic effect on diabetes induced animals<sup>176</sup>. The ethanol extract of *Plumbago zeylanica* root on key enzymes of glycolysis and muscle hexokinase, phosphofructokinase, pyruvate kinase, lactate dehydrogenase activities were diminished in diabetic rats<sup>177</sup>.

Hypocholesterolemic Action: Pharmacological and Clinical studies carried out indicates that *Plumbago zeylanica* extract has hypolipidaemic and antiatherosclerotic activities.  
<sup>178</sup>Plumbagin, an active principle isolated from *plumbago zeylanica* brings about a definite regression of atherosclerosis and prevents the accumulation of cholesterol and triglycerides in liver and aorta. Panchcole, an Ayurvedic formulation containing *plumbago zeylanica* as one of its chief ingredients has been advocated to produce hypolipidaemic effect<sup>179</sup>.

**Ajaji** (Cumin seed (*Cuminum cyminum L.*)) has *katu rasa*, *ushna veerya* and *katu vipaka*. In studies conducted on rats with induced diabetes, cumin reduced blood glucose levels<sup>180</sup>. One mechanism for this reduction suggests the inhibition of aldose reductase and alpha-glucosidase. In addition, reductions in plasma and tissue

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<sup>175</sup> Dhanapakiam P., J. Mini Joseph, V.K. Ramaswamy, M. Moorthi and A. Senthil Kumar : The cholesterol lowering property of coriander seeds (*Coriandrum sativum*): Mechanism of action. Journal of Environmental Biology. 2008; 29(1): 53-56

<sup>176</sup> Olagunju JA et al. An Investigation into the biochemical basis of the observed hyperglycaemia in rats treated with ethanol root extract of *plumbago zeylanica*. 1999. 13(4):346-8

<sup>177</sup> Kumar G, Sharmila Banu G, Maheswaran R, Rema S, Rajasekara Pandian M, Murugesan AG. Effect of *Plumbago zeylanica* L. on blood glucose and plasma antioxidant status in STZ diabetic rats. J Nat Remedies 2007; 7: 66-77.

<sup>178</sup> Sharma, Nisha and Kaushik, Purshotam. Medicinal, Biological, and Pharmacological Aspects of *Plumbago Zeylanica* (Linn.), 2014 JPP 2014: 3(4):117-120

<sup>179</sup> Ram A. Effect of *Plumbago zeylanica* in hyperlipidaemic rabbits and its modification by vitamin E. Indian J Pharmacol 1996; 28: 161–6.

<sup>180</sup> Talpur N, Echard B, Ingram C, Bagchi D, Preuss H. Effects of a novel formulation of essential oils on glucose-insulin metabolism in diabetic and hypertensive rats: a pilot study. Diabetes Obes Metab . 2005;7(2):193-199.

cholesterol, phospholipids, free fatty acids, and triglycerides (secondary to diabetes) were demonstrated in another animal study<sup>181</sup>.

**Hapusha** (*Juniperus Communis*) has *katu rasa*, *ushna veerya* and *katu vipaka*. While there are not very many research papers written on the efficacy of Juniper berries and leaves as medicinal herbs, they are said to exhibit potent anti-inflammatory properties and are used to support healthy kidney and urinary tract function, besides promoting healthy blood pressure when taken in normal dosages<sup>182</sup>.

**Sattu** is widely used in *santarpaniya* disorders. It is prepared by roasting gram flour but has now evolved to include other nutritious flours like barley, wheat etc. *Sattu* is a perfect blend of balanced nutrients and is prepared in one of the healthiest cooking methods – roasting. *Sattu* has high fibre and phytic acid content. Method of preparing *sattu* is such that it retains the nutrient value and increases the shelf life of the ingredients. Roasting can improve protein digestibility.<sup>183</sup> The goal of roasting is to improve sensory qualities and achieve inactivation of destructive enzymes which improves the storage and nutritional quality of the product.<sup>184</sup> Research reports reduced trypsin inhibitor properties when seed temperatures reached 90-100°C. Researchers<sup>185</sup> reported lipoxygenase properties was lost at temperatures of 75-80°C. Some also<sup>186</sup> reported that during roasting total phenols and tannins decrease. It has been observed that the<sup>187</sup> reduction in mineral contents during roasting might be due to the loss of nutrients while heating at high temperature.

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<sup>181</sup> Lee HS. Cuminaldehyde: aldose reductase and alpha-glucosidase inhibitor derived from *Cuminum cyminum* L. seeds. *J Agric Food Chem* . 2005;53(7):2446-2450.

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<http://www.webmd.com/vitamins-supplements/ingredientmono-724-juniper.aspx?activeingredientid=724&activeingredientname=juniper>

<sup>183</sup> Nout, M.J.R., 1993. Processed weaning foods for tropical climates. *Int. J. Food Sci. Nutr.*, 43: 213-221.

<sup>184</sup> Rackis, J.J., W.J. Wolf and E.C. Baker, 1986. Protease Inhibitor in Plant Foods, Content and Inactivation. In: *Toxicological Significance of Enzyme Inhibitors in Food*, Friedman, M. (Ed.). *Advance in Exph. Med. and Biol.* Plenum, New York, pp: 299-347.

<sup>185</sup> Chen, A.O. and J.R. Whitaker, 1986. Purification and characterization of a lipoxygenase from immature English peas. *J. Agric. Food Chem.*, 34: 203-211.

<sup>186</sup> Shinde, G.B, R.N. Adsule and A.A. Kale, 1991. Effect of dehulling and cooking treatment on phytate phosphorus polyphenols and trypsin inhibitor activity of cowpea seed. *Ind. Food Pack*, 36: 63-65.

<sup>187</sup> Malik, M., U. Singh and S. Dahiya, 2002. Nutrient composition of pearl millet as influenced by genotypes and cooking methods. *J. Food Sci. Technol.*, 39: 463-468.

Elevated plasma cholesterol or elevated LDL-cholesterol concentrations have been shown to be one of the risk factors.<sup>188</sup> It has been suggested that dietary fibre or more specifically phytate which is a component of fibre can influence the etiology of heart disease<sup>189</sup>. Researchers<sup>190</sup> showed that dietary phytate supplementation resulted in the lowering of serum cholesterol and triglyceride levels. This effect accompanied the decrease in serum Zn level and Zn-Cu ratio. This is because coronary heart disease appears to be caused by an imbalance of Zn-Cu metabolism.

Above are all the important reasons why *sattu* is recommended as one of the important food in *santarpaniya vyadhi*. Those individuals who consume these type of formulations can have normalization of agni, smriti (memory) and buddhi, that is the power of forming and retaining concepts and general notions, intelligence, reason, intellect, discernment, judgment which gets deranged in *santarpaniya vyadhis* in latter stages gets normalised.

Those individuals who exercise regularly, who do not eat until the previous meals are completely digested, who do not indulge in overeating, who regularly consume barley and wheat in diet get relief from all the diseases due to *santarpana* and obesity. This is how all the *santarpananya vyadhis* are treated with *apatarpana* medicines.

If we observe the herbs mentioned in the management of *santarpaniya vyadhis* it is evident from the following table that most of the herbs are *tikta*, *katu*, *kashaya rasa* dominant having *katu vipaka* and *ushna veerya*. These properties are attributed to akasha and vayu mahabhuta.

**Table 1:** Concise information about herbs used in management of *santarpaniya* diseases

|                | Latin<br>Name              | name | Family                | Rasa   | Veerya         | Vipaka        |
|----------------|----------------------------|------|-----------------------|--|----------------|---------------|
| <i>Amalaki</i> | <i>Emblica Officinalis</i> |      | <i>Euphorbia ceae</i> | <i>Panchara sa</i><br><i>(lavanava rjit)</i> | <i>Madhura</i> | <i>Sheeta</i> |

<sup>188</sup> Griffin, John D et al Dietary Cholesterol and Plasma Lipoprotein Profiles: Randomized-Controlled Trials, 2013, 2(4):274-282

<sup>189</sup> Abdoulaye Coulibaly et al, 2011 Phytic Acid in Cereal Grains: Structure, Healthy or Harmful Ways to Reduce Phytic Acid in Cereal Grains and Their Effects on Nutritional Quality. American Journal of Plant Nutrition and Fertilization Technology, 1: 1-22. Doi: 10.3923/ajpnft.2011.1.22

<sup>190</sup> Jariwalla, R.J., R. Sabin, S. Lawson and Z.S. Herman, 1990. Lowering of serum cholesterol and triglycerides and modulation of divalent cations by dietary phytate. J. Applied Nutr., 42: 18-28.

| Name                 | Latin name                  | Family                | Rasa<br><i>amlapradhana</i>  | Veerya                              | Vipaka        |
|----------------------|-----------------------------|-----------------------|--|-------------------------------------|---------------|
| <i>Bibhitak</i>      | <i>Terminalia bellerica</i> | <i>Combretaceae</i>   | <i>Kashaya</i>   | <i>Madhura</i>                      | <i>Ushna</i>  |
| <i>Haritaki</i>      | <i>Terminalia chebula</i>   | <i>Combretaceae</i>   | <i>Pancharasa</i><br>( <i>lavanava rjit</i> )<br><i>Kashaya pradhana</i> | <i>Madhura</i>                      | <i>Ushna</i>  |
| <i>Patha</i>         | <i>Cissampelous pareira</i> | <i>Menispermaceae</i> | <i>Tikta</i>   | <i>Katu</i>                         | <i>Ushna</i>  |
| <i>Saptparna</i>     | <i>Alstonia scholaris</i>   | <i>Apocynaceae</i>    | <i>Tikta-kashaya</i>   | <i>Katu</i>                         | <i>Ushna</i>  |
| <i>Vatsak</i>        | <i>Cyprus rotundus</i>      | <i>Apocynaceae</i>    | <i>Tikta-kashaya</i>   | <i>Katu</i>                         | <i>Sheeta</i> |
| <i>Nagarmothha</i>   | <i>Cissampelous</i>         | <i>Cyperaceae</i>     | <i>Kashaya,t</i><br><i>ikta,Katu</i>                                     | <i>Katu</i>                         | <i>Sheeta</i> |
| <i>Madanphala</i>    | <i>Randia spinosa</i>       | <i>Rubiaceae</i>      | <i>Kashaya, madhura,t</i><br><i>ikta,Katu</i>                            | <i>Katu</i>                         | <i>Ushna</i>  |
| <i>Nimb</i>          | <i>Azardirecta indica</i>   | <i>meliaceae</i>      | <i>Tikta,katu</i>  | <i>Katu</i>                         | <i>Sheeta</i> |
| <i>Aragvadh</i>      | <i>Azardirecta indica</i>   | <i>leguminaceae</i>   | <i>Madhura</i>   | <i>Madhura</i>                      | <i>Sheeta</i> |
| <i>Devdaru</i>       | <i>Cedrus deodara</i>       | <i>pinaceae</i>       | <i>Tikta</i>   | <i>Katu</i>                         | <i>Ushna</i>  |
| <i>Gokhshur</i>      | <i>Tribulis terreestis</i>  | <i>Zygophyllaceae</i> | <i>Madhura</i>   | <i>Madhura</i>                      | <i>Sheeta</i> |
| <i>Khadir</i>        | <i>Acacia catechu</i>       | <i>Leguminaceae</i>   | <i>Tikta kashaya</i>   | <i>Katu</i>                         | <i>Sheeta</i> |
| <i>Haridra</i>       | <i>Curcuma longa</i>        | <i>Zinziberaceae</i>  | <i>Tikta katu</i>  | <i>Katu</i>                         | <i>Ushna</i>  |
| <i>Daru-hari dra</i> | <i>Berberis aristata</i>    | <i>Berberidaceae</i>  | <i>Tikta kashaya</i>   | <i>Katu</i>                         | <i>Ushna</i>  |
| <i>Kushth</i>        | <i>Saussurea lappa</i>      | <i>Compositae</i>     | <i>Tikta</i>   | <i>Tikta katu</i><br><i>madhura</i> | <i>Ushna</i>  |

| Name       | Latin name              | Family           | Rasa                       | Veerya  | Vipaka              |
|------------|-------------------------|------------------|----------------------------|---------|---------------------|
| Hingu      | Ferula narthex          | Umbelliferae     | Tikta-kashaya              | Katu    | Ushna               |
| Sunthi     | zinziber officinale     | zinziberaceae    | Tikta-kashaya              | Katu    | Ushna               |
| Pimpli     | Piper longum            | Piperaceae       | Katu                       | Madhura | Anu-ushn a, Sheet a |
| Maricha    | Piper nigrum            | Piperaceae       | Katu                       | Katu    | Ushna               |
| Ajmoda     | Carum roxburghianum     | Umbelliferae     | Katu,tikta                 | Katu    | Ushna               |
| Pashanbed  | Bergenia ligulata       | Saxifragaceae    | Kashaya,tikta              | Katu    | Sheet a             |
| Vacha      | Acorus calamus          | Araceae          | Katu,tikta                 | Katu    | Ushna               |
| Ativisha   | Aconiatum heterophyllum | Ranunculaceae    | Tikta,katu                 | Katu    | Ushna               |
| Ajawayan   | Trachyspermum ammi      | Umbelliferae     | Katu,tikta                 | Katu    | Ushna               |
| Vidang     | Emblex ribes            | myrsinaceae      | Katu,kashaya               | Katu    | Ushna               |
| Shigru     | Moringa olifera         | Moringaceae      | Katu ,tikta                | Katu    | Ushna               |
| Kutki      | Picrorhiza kurroa       | Scrophulariaceae | Tikta                      | Madhura | Sheet a             |
| Shalparni  | Desmodium-Gangeticum    | leguminosae      | Madhura,tikta              | Katu    | Ushna               |
| Kebhukmool | Costus speciosus        | Zinziberaceae    | Tikta,kashaya              | Katu    | Ushna               |
| Dhanyaka   | Coriandrum sativum      | Umbelliferae     | Tikta,kashaya,madhura,Katu | Katu    | Ushna               |
| Chitraka   | Plumbago zeylanica      | Plumbaginaceae   | Katu                       | Katu    | Ushna               |

| Name                  | Latin name                   | Family                | Rasa  | Veerya               | Vipaka           |
|-----------------------|------------------------------|-----------------------|---|----------------------|------------------|
| <i>Hapusha</i>        | <i>Juniperus communis</i>    | <i>Pinaceae</i>       | <i>Katu ,tikta</i>                                | <i>Katu</i>          | <i>Ushna</i>     |
| <i>Twak</i>           | <i>Cinnamomum zelyanicum</i> | <i>Lauracea e</i>     | <i>Katu ,tikta, madhura</i>                       | <i>Madhura</i>       | <i>Sheeta</i>    |
| <i>Bruhati</i>        | <i>Solanum indicum</i>       | <i>Solaneacea e</i>   | <i>Katu ,tikta</i>                                | <i>Katu</i>          | <i>Ushna</i>     |
| <i>Agnimanta</i>      | <i>Premna mucronata</i>      | <i>Verbenacea e</i>   | <i>Katu,tikta, kashaya, madhura</i>               | <i>Katu</i>          | <i>Ushna</i>     |
| <i>Khajura</i>        | <i>Phoenix sylvestris</i>    | <i>Palmae</i>         | <i>Madhura</i>                                    | <i>Madhura</i>       | <i>Sheeta</i>    |
| <i>Vruksham al</i>    | <i>Garcinia indica</i>       | <i>Guttiferae</i>     | <i>Amala(unripe)</i><br><i>Madhura mala(ripe)</i> | <i>Amala</i>         | <i>Ushna</i>     |
| <i>Dadim</i>          | <i>Punica granatum</i>       | <i>punicacea e</i>    | <i>Madhur,k ashaya,a mala</i>                     | <i>Madhur/a mala</i> | <i>Anu-Ushna</i> |
| <i>Ajaji (jeerak)</i> | <i>Cuminum cyminum</i>       | <i>Umbelliferae</i>   | <i>Katu</i>                                       | <i>Katu</i>          | <i>Ushna</i>     |
| <i>Ela</i>            | <i>Elettaria cardmom um</i>  | <i>Zinziberacea e</i> | <i>Katu , madhura</i>                             | <i>Katu</i>          | <i>Sheeta</i>    |
| <i>Musta</i>          | <i>Cyperus rotendus</i>      | <i>Cyperacea e</i>    | <i>Tikta,katu, kashaya</i>                        | <i>Katu</i>          | <i>Sheeta</i>    |

***Phanita*** (molasses) is a semisolid condensed sugarcane preparation, traditionally used to prepare *arista*, *asava* and other forms of alcoholic fermentation. Its heavy in nature, sweet in taste, nutritive and non - aphrodisiac and aggravates tridosha. *Sattu*, ghee, whey, sour fruits like *Garcinia combojia*, and *kanji* work as *tarpana* medicines in urinary ailments and *udavarta* (abnormal conditions characterized by retention of faeces, urine and flatus, associated with pain and leading to or caused by anti-peristaltic movements in the body).

***Mantha*** is a formulation made by adding fourteen times of water and blending it thoroughly. *Mantha* of *kharjura* (dates), *manuka* (resins), *gracina*, *tamarind*,

pomegranate, *falsa* (*Grewia asiatica*) and *amalaki* is useful in alcoholics and alcohol induced disorders. *Mantha* prepared out of sweet and sour substances if mixed together and added with or without ghee proves to be *santarpana* and improves strength, lustre and power of body.

**Kharjura** (dates, *Phoenix dactylifera*) has *madhura rasa*, *sheeta veerya* and *madhura vipaka*. It is highly nutritious, and has therapeutic effect in the prevention of diseases through modulation of anti-inflammatory and antioxidant activities, besides other effects. It contains insignificant amounts of fat and has no cholesterol. It is rich in potassium and iron, besides having adequate levels of B-Complex group of vitamins. They contain health benefiting flavonoid polyphenolic antioxidants. Zea-xanthin is an important dietary carotenoid that selectively gets absorbed in the retinal macula lutea, where it is thought to provide antioxidant and protective light-filtering functions. It thus offers protection against age-related macular degeneration, especially in elderly populations.

**Mrudvika** are raisins made of dried grapes. They have *madhura rasa*, *madhura vipaka* and *sheeta veerya* and have potent nutritional properties. The most abundant are polyphenol, phenolic acid, tannin are the flavonols, quercetin, kaempferol, phenolic acids, caftaric and coutaric acid. On a wet weight basis, some polyphenol, phenolic acid, and tannin, such as protocatechuic and oxidized cinnamic acids, are present at a higher level in raisins compared to grapes. In human intervention studies, raisins can lower the postprandial insulin response, modulate sugar absorption (glycemic index), affect certain oxidative biomarkers, and promote satiety via leptin and ghrelin<sup>191</sup>.

**Dadima** (*Punica Granatum*): It is *madhura*, *kashaya* and *amla rasa* with *ushna veerya* and *madhura vipaka*. Pomegranates have the potential to thin the blood, increase blood flow to the heart, reduce blood pressure, reduce plaque in the arteries, and reduce bad cholesterol while increasing good cholesterol<sup>192</sup>. Pomegranate seed oil and fermented juice polyphenols tend to inhibit breast cancer cell proliferation, invasion, and promotes apoptosis of breast cancer cells<sup>193</sup>.

**Falasa** (*Grewia asiatica*): has *kashaya*, *amla*, *madhura rasa* and *laghu*, *veerya sheeta guna* and *madhura vipaka*. It is useful in *madatya*, *pittaprakopa*, *trishna*, *daha*, *hridroga*,

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<sup>191</sup> Williamson G, Carugh A. Polyphenol content and health benefits of raisins. Nutr Res. 2010 Aug;30(8):511-9. doi: 10.1016/j.nutres.2010.07.005.

<sup>192</sup> Lansky, E.; Shubert, S.; Neeman, I. Pharmacological and therapeutical properties of pomegranate. In Proceedings 1st International Symposium on Pomegranate; Megarejo, P.; Martínez, J. J.;

<sup>193</sup> N.D., R. Mehta, W. Yu, I. Neeman, T. Livney, A. Amichay, D. Poirier, P. Nicholls, A. Kirby, W. Jiang, R. Mansel, C. Ramachandran, T. Rabi, B. Kaplan, and E. Lansky: Chemopreventive and adjuvant therapeutic potential of pomegranate (*Punica granatum*) for human breast cancer. Breast Cancer Research and Treatment 2002; 71(3): 203-17

*amavata, vatarakta, shoola, kshaya, rohini, yoniroga, vrana, jwara*. It shows a potent antioxidant properties and shows radio protective properties<sup>194</sup>.

If we observe the food substances, fruits and other edibles which are advised for the management of *apatarpana* have high glycemic index. Dates, raisins, and certain fruits mentioned are fast energy giving substances while formulation with sattu are slow energy giving substances.

It is very interesting to note that honey and sattu are used both in *apatarpana* and *santarpaniya vyadhis*. In *santarpanajanya vyadhis*, *sattu* is used along with certain herbs, which are *tikta* and *katu rasa* dominant. Apart from herbs oil, ghee and honey in prescribed portion is used. While in *apatarpana* diseases *sattu* has been used along with sugar, alcoholic beverages, honey, oil and ghee. This is the importance of *samayoga* (combination) of *dravyas* mentioned by Charak elsewhere. *Sattu* when advised with alcoholic beverages or with certain sour substance exerts different nutritional properties.

When *sattu* is given with acidic and fermented substances like alcohol, an enzymatic degradation of phytic acid of *sattu* is observed. Such a reduction in phytate may increase the amount of soluble iron, zinc and calcium several folds. This makes the combination of sattu more nutritious as compared to the formulation mentioned in the management of santarpanajanya diseases. Over-nutrition and disorders induced by it leads to immune activation or susceptibility to inflammatory diseases, such as diabetes while under nutrition results in immune suppression or susceptibility to infection. Over-nutrition (prolonged intake of high fat/sugar diets) and infection lead to chronic and acute inflammation through nutrient and pathogen sensing systems, respectively<sup>195</sup>

### List of research works done as post graduate and post doctoral level on obesity, dyslipidemia, hyperlipidemia

About 42 research works are found on the subject of hyperlipidaemia with various aspects like aetiopathogenesis and management. Some important work on hyperlipidaemia and hypercholesterolaemia are as follows:

Faculty of Ayurveda, IMS, Banaras Hindu University, Varanasi:

1. Satyavati G.V. (1966): Effect of an indigenous drug on lipid metabolism w.s.r to obesity and atherosclerosis.
2. Shastri V. V. (1967): Effect of certain indigenous drugs on intraarterial thrombosis associated with hyperlipidaemia.

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<sup>194</sup> Sharma KV, Sisodia R. Evaluation of free radical scavenging activity and radioprotective efficacy of *Grewia asiatica* fruit. J Radio Prot 2009; 29: 429–443.

<sup>195</sup> Wellen KE, Hotamisligil GS: Inflammation, stress, and diabetes. J Clin Invest 2005, 115:1111-1119.

3. Tripathi S N (1973): Studies on the use of Oleoresin Guggulu an indigenous drug in the disorders of lipids.
4. Agarwal D.V. (1973): Clinical and experimental studies on Ayurvedic hypocholesterolaemic drugs.
5. Upadhyaya B.N. (1975): Clinical and experimental study on hypocholesterolaemic and hypolipidaemic action of Gum Guggulu.
6. Sharma Sudhakar (1975): Studies on effect of Terminalia tomentosa on hyperglycaemia and hypercholesterolaemia.
7. Gupta (Smt.) Mithilesh (1977): Effect of C. mukul and endocrinial and biochemical changes in hyperlipidaemia.
8. Gupta O.P. (1981): An assessment of intermittent use of C. mukul (Guggulu) in the treatment of hypercholesterolaemia and hyperlipidaemia in IHD.
9. Ranasingha S G (1990): A critical study on the concept of lipid group of drugs (Charka) in the management of lipidaemia and ischaemic heart disease.
10. Mamgain Pratibha (1991) :Study of lipid profile in individuals of IHD and evaluation of hypolipidaemic action of Lekhaneeya drugs Vacha and Ativisha.

State Ayurvedic College, Lucknow:

1. Mishra Ramanand (1975): The effect of Arogyavardhini in relation to obesity and blood cholesterol.
2. Shali Bala (1978): Role of Arogyavardhini on blood lipids and Medoroga with Anupan of Sharangdhar Mahamanjishthadi Kwath.
3. Nigam R. P. (1982): Clinical trial of Arogya-vardhini-herbal in cases of raised Raktagata Sneha (Hyperlipidaemia).

National Institute of Ayurveda, Jaipur:

1. Sood Rajiv (1999) : Clinical evaluation of Bala-Hareetaki on serum cholesterol.
2. Bhaskar Rao (2002) : Aetiopathological study of hyperlipidaemia w.s.r. to Sthaulya : a clinical study.
3. Gupta Keshav Prasad (2005) : Aetiopathological studies of hyperlipidaemia (Medodushti) w.s.r to Diabetes mellitus and therapeutic trial of Ayurvedic formulation (Lipidocare).

Gopabandhu Ayurveda Mahavidyalaya, Puri :

1. Tripathy U.C. (1985): Concept of Medoroga vis-à-vis Hyperlipidaemia and its management with Navaka Guggulu.
2. Pande S (2002) : Biological effect of Lekhana Basti w.s.r. to lipid profile.

Smt. K G M Punarvasu Ayurveda College,Mumbai:

1. Majumadar Dattatraya B. (1990): Rasagata-Sneha (cholesterol) Ka Naidanika Chikitsatmaka Adhyayana.

2. Kadam Sandhya (1997): Hyperlipidaemia (Rasa-Raktagata Sneha Vriddhi) mein Amritadi Yoga Ka Prayoga Chikitsatmaka Adhyayana.
3. Ratnakaran Anuradha R. (1997): Clinical evaluation of the role of Navaka Guggulu on the Rasa-Raktagata-Sneha-Vriddhi.
4. More Manojkumar B. (1998): Methika-Beeja Ka hyperchole-sterolaemia (Rasa-Raktagata Sneha Vriddhi) mein Prayoga.
5. Virkar Dattu (1998): Mustadi Mahakashaya (Lekhaneeya Gana) Ka hyperlipidaemia (Rasagata-Sneha-Vriddhi) mein prayoga aur Chikitsatmaka Adhyayana.
6. Jagtap Reshma (1999): Hyperlipidaemia (Rasagata-Sneha-Vriddhi) evam Hypertension (Uchha-Rakta-Chapa) mein Krishnadi Choorna ka Prayoga aur Chikitsatmaka Adhyayana.
7. Jankar Nilambari (2002): Hyperlipidaemia (Rasa-Raktagata-Sneha) mein Lekhaneeya Mahakashaya (Gana) Kala Basti Ek Chikitsatmaka Adhyayana.
8. Paradkar Hemant S (2004): Rasa-Raktagata-Sneha-Vriddhi mein Trishila Guggulu (Triphala, Shilajit, Guggulu) yoga ka Chikitsatmaka Adhyayana.

Government Ayurvedic College, Trivandrum :

1. Ravindran C.A. (1986): A clinical evaluation of hyperchole-sterolaemia w.s.r. to Kalasaka.
2. Suresh Babu M.R. (1994): A clinical study to assess the efficacy of Lekhaneeya Gana in hypercholesterolaemia.
3. Ansari P.Y. (1994): An experimental study on effect of Musta (Cyperus rotundus) in hypercholesterolaemia.
4. Johnny Joseph (1995) : A study to assess the hypolipidaemic properties of Dolichos biflorus (Kulatha).
5. Sreelatha P.K.(1996):Management of hypercholesterolaemia with an Ayurvedic compound.
6. Suresh A.V. (1999): A study on Snehapana in hyperchole-sterolaemia conditions during treatment.
7. Razeena K. (2003): Pharmaceutical preparation and standardization of compound herbomineral preparation and its efficacy in hypercholesterolaemia.
8. Seemaja G. (2003): A clinical study to assess the efficacy of Ayurvedic compound in the management of hyperlipidaemia,
9. Pankajam P. K. (2003) : A study on the effect of selected modalities of Yoga and naturopathy in the control of hyperlipidaemia.

Tilak Ayurveda Mahavidyalaya, Pune:

1. Kad Vilas S (1997): Study of lipids/Prasadakaya Dhatu with reference to Ayurvedic Swastha and Atura Pareekshana.

University of Pune:

1. Arora N. K. (2001): Effect of Hareetaki (*Terminalia chebula ratha.*) in hypercholesterolaemia.

B V College of Ayurveda, Pune:

1. Sankapal Milind Kumar (2005): Upashayatmak study of Ushnodaka on blood cholesterol and Sthaulaya lakshana.

Rajiv Gandhi Govt. PG Institute of Ayurveda, Paprola:

1. Gupta Madhu (2000): Effect of Ayurvedic formulation on Medoroga w.s.r. to Hyperlipidaemia.

Institute of Postgraduate Education and Research in Ayurveda, Kolkata:

1. Mishra D K (1991) : Role of Commiphora mukul and P. compound in Medoroga w.s.r. to obesity and cholesterol.

Govt. Ayurvedic Medical College, Mysore:

1. Suchitra S.S. (2002) : A study on Rookshna Chikitsa w.s.r. to the effect of Shuddha Guggulu and Shuddha Shilajatu on Sthaulya (hypercholesterolaemia) A comparative study.

SDGM Ayurveda Medical College, Gadag:

1. Mudigoudar Yoshadha S (2000) : The efficacy of Pippalyadi Guggulu in Medoroga (w.s.r. to its hypolipidaemic effect).

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## Vidhishonitiya Adhyaya

### Sutra Sthana Chapter 24. Characteristics of Shonita (Blood), its vitiation and disorders

#### Abstract

Blood is important for maintaining vitality of individuals. It is also the most important factor in patho-physiology of any disease as it carries vitiated dosha leading to disease. This chapter focuses on rakta dhatu (blood tissue), delineating the characteristic features of pure blood as well as the factors influencing the formation of blood. Pure blood (Shuddha rakta) is formed by following proper dietary habits. Therefore, characteristics of pure blood, the causative factors for vitiation of blood, dosha specific features of vitiated blood, their treatment and procedure of bloodletting are described in this chapter. Since blood plays an important role in the treatment of cerebrovascular diseases, a description of ailments such as mada (intoxication/confusion), murchha (syncope), and sanyasa (coma), their pathology and courses of treatment, and mind's role in the pathogenesis of some of these diseases have also been provided.

**Keywords:** Rakta, rakta visravana, sanyasa sangyavahi srotas, vegetative state, shonita, sadyaphala kriya, sangyaprabodhanam, pure blood, blood vitiating factors, coma, syncope, intoxication, drug addiction.

#### Introduction

In the previous chapters of *Yojana Chatushka* (tetrad on management protocol), procedures for the management of disorders caused due to vitiation of three dosha were described. In continuation, the present chapter describes the management principles of disorders due to shonita (blood) vitiation. Formation of pure blood is very important for survival because blood is vital for sustaining life [1,2]. Origin, development, and survival of the body depend on blood [3]. Various etiological factors for vitiation of rakta have been explained in this chapter. Vitiated rakta causes various diseases e.g. stomatitis, redness in the eye, etc. If cold (or hot) and rough (or unctuous) dravyas are used for treatment without response, raktaja vikara(blood disorder) should be the reason. The line of treatment for *raktaja vikara* constitutes courses of treatment for *raktapitta* (i.e., prescribed for cases of vitiated *pitta* such as purgation and fasting, along with bloodletting). The physical appearance of pure blood has been described to be of golden colors, like red lotus, firefly, *lakh* (*laksha*), the fruit of *gunja* (*Abrus precatorius Linn.*). Any deviation from these could be explained to be due to *vikaras* or disorders. Some of the prominent blood-related disorders such as *mada* (intoxication), *murchcha* (syncope) and *sanyasa* (coma) have therefore been described in this chapter. Their etiopathogenesis, types, symptoms and grades of severity - in this sequence - have been explained, along with some suggested courses of treatment. In the case of *mada* and *murchcha*, purificatory measures (Panchakarma) have been suggested, while for *sanyasa*, an emergency treatment (*atyayika chikitsa*) should be followed.

## Sanskrit text, Transliteration and English Translation

अथातो विधिशोणितीयमध्यायं व्याख्यास्यामः ||१||

इति ह स्माह भगवानात्रेयः||२||

athātō vidhiśōṇitīyamadhyāyaṁ vyākhyāsyāmaḥ ||1||

iti ha smāha bhagavānātrēyah||2||

athAto vidhishoNitlyamadhyAyaM vyAkhyAsyAmaH ||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Vidhishonitiya” (Characteristics of Shonita (Blood), its vitiation and disorders). Thus said Lord Atreya. [1-2]

### Formation of pure blood

विधिना शोणितं जातं शुद्धं भवति देहिनाम्।

देशकालौकसात्म्यानां विधिर्यः सम्प्रकाशितः॥३॥

vidhinā śōṇitam jātam śuddham bhavati dēhinām|

dēśakālaukasātm̄yānām vidhiryah samprakāśitah||3||

vidhinA shoNitaM jAtaM shuddhaM bhavati dehinAm|

deshakAlaukasAtmyAnAM vidharyaH samprakAshitaH||3||

Pure blood is formed in harmony with place, time, and adaptation, as said earlier. (C.Su.6) [3]

### Effects of pure blood on body

तद्विशुद्धं हि रुधिरं बलवर्णसुखायुषा।

युनक्ति प्राणिनं प्राणः शोणितं हयनुवर्तते॥४॥

tadviśuddham hi rудhiraṁ balavarṇasukhāyuṣā|

yunakti prāṇinām prāṇah śōṇitam hyanuvartatē||4||

tadvishuddhaM hi rудhiraM balavarNasukhAyuShA|

yunakti prANinaM prANaH shoNitaM hyanuvartate||4||

That pure blood provides the individual with strength, complexion, happiness, and life. Because vitality of life depends on blood. [4]

## Causes of blood vitiation

प्रदुष्टबहुतीक्ष्णोष्णौमर्दयैरन्यैश्च तद्विधैः।  
तथाऽतिलवणक्षारैरम्लैः कटुभिरेव च||७॥  
कुलत्थमाषनिष्पावतिलतैलनिषेवणैः।  
पिण्डालुमूलकादीनां हरितानां च सर्वशः||६॥  
जलजानूपबैलानां प्रसहानां च सेवनात्।  
दृश्यम्लमस्तुसुक्तानां सुरासौवीरकस्य च||७॥  
विरुद्धानामुपक्लिन्नपूतीनां भक्षणेन च।  
भुक्त्वा दिवा प्रस्वपतां द्रवस्त्रिग्धगुरुणि च||८॥  
अत्यादानं तथा क्रोधं भजतां चातपानलौ।  
छर्दिवेगप्रतीघातात् काले चानवसेचनात्||९॥  
श्रमाभिघातसन्तापैरजीर्णाद्यश्नैस्तथा।  
शरत्कालस्वभावाच्च शोणितं सम्प्रदुष्यति॥१०॥

praduṣṭabahutīkṣṇoṣṇairmadyairanyaīśca tadvidhaiḥ|  
tathā'tilavaṇakṣārairamlaiḥ kaṭubhirēva ca||5||  
kulatthamāṣanispāvatilatalaniṣevanaṇaiḥ|  
piṇḍālumūlakādīnāṁ haritānāṁ ca sarvaśah||6||  
jalajānūpabailānāṁ prasahānāṁ ca sēvanāt|  
dadhyamlamastusuktānāṁ surāsauvīrakasya ca||7||  
viruddhānāṁupaklinnapūtīnāṁ bhakṣaṇēna ca|  
bhuktvā divā prasvapatāṁ dravasnigdhagurūṇi ca||8||  
atyādānam tathā krōdham bhajatāṁ cātapañalau|  
chardivēgapratīghātāt kālē cānavasēcanāt||9||  
śramābhīghātasantāpairajīrṇādhyaśanaistathā|  
śaratkālasvabhāvācca śōṇitarāṁ sampraduṣyati||10||

praduShTabahutIkShNoShNairmadyairanyaishca tadvidhaiH|  
tathA~atilavaNakShArailaiH kaTubhireva ca||5||

kulaṭṭhaṁ AśaṇiṣhpAvaṭṭilaṭṭaṇiShevaṇaiḥ।  
 piNDAlumUlakAdInAM haritAnAM ca sarvashaḥ॥6॥  
 jalajAnUpabailAnAM prasahAnAM ca sevanAt|  
 dadhyamlamastusuktAnAM surAsauvlrakasya ca॥7॥  
 viruddhAnAmupaklinnapUtlInAM bhakShaNena ca|  
 bhuktvA divA prasvapatAM dravasnigdhagurUNi ca॥8॥  
 atyAdAnaM tathA kroḍhaM bhajatAM cAtapAnalau|  
 chardivegapratlghAtAt kAle cAnavasecanAt॥9॥  
 shramAbhighAtasantApairajIrNAdhyashanaistathA|  
 sharatkAlasvabhAvAcca shoNitaM sampraduShyati॥10॥

The blood is vitiated due to the following causes:

By habitual intake of spoiled or unsuitable food and/or liquids, overeating, acidic or pungent liquor and other similar drinks, too much salty, alkaline substances, sour and pungent food, *kulatha* (Dolichos biflorus Linn.), *masha* (Phaseolus mungo Linn.), *nishpava* (Dolichos lablab Linn.), *tila taila* (Sesamum indicum Linn. oils), *pindalu* (Randia uliginosa DC.), radish and all green (leafy) vegetables, meat of aquatic and marshy animals, burrowing animals and those that snatch birds, excessive intake of curd, sour whey (curd-water), vinegars and other sour fermented liquids, consuming decomposed, putrid food with opposite properties excessive sleeping during the day especially after taking liquids, unctuous and heavy food, excessive anger, excessive exposure to the sun and the wind, suppression of the natural urges like vomiting, avoidance of blood-letting in prescribed time (autumn), too much exertion, injury, heat, indigestion, taking meal during indigestion and due to natural pattern in autumn season.[5-10]

### Diseases due to vitiation of blood

ततः शोणितजा रोगाः प्रजायन्ते पृथग्विधाः।  
 मुखपाकोऽक्षिरागश्च पूतिघाणास्यगन्धिता॥१॥  
 गुल्मोपकुशवीसर्परक्तपित्तप्रमीलकाः।  
 विद्रधी रक्तमेहश्च प्रदरो वातशोणितम्॥२॥  
 वैवर्ण्यमग्निसादश्च पिपासा गुरुगात्रता।  
 सन्तापश्चातिदौर्बल्यमरुचिः शिरसश्च रुक्॥३॥  
 विदाहश्चान्नपानस्य तिक्ताम्लोद्गिरणं क्लमः।

क्रोधप्रचुरता बुद्धेः सम्मोहो लवणास्यता॥१४॥  
स्वेदः शरीरदौर्गन्धयं मदः कम्पः स्वरक्षयः।  
तन्द्रानिद्रातियोगश्च तमसश्चातिदर्शनम्॥१५॥  
कण्डवरुःकोठपिडकाकुष्ठचर्मदलादयः।  
विकाराः सर्व एवैते विज्ञेयाः शोणिताश्रयाः॥१६॥  
शीतोष्णस्निग्धरुक्षाद्यैरुपक्रान्ताश्च ये गदाः।  
सम्यक् साध्या न सिद्ध्यन्ति रक्तजांस्तान् विभावयेत्॥१७॥  
tataḥ śōṇitajā rōgāḥ prajāyantē pṛthagvidhāḥ।  
mukhapākō'ksirāgaśca pūtighrāṇāsyagandhitā॥१॥  
gulmōpakuśavīsarparaktapittapramīlakāḥ।  
vidradhī raktamēhaśca pradarō vātaśōṇitam॥१२॥  
vaivarṇyamagnisādaśca pipāsā gurugātratā।  
santāpaścātidaurbalyamaruciḥ śirasaśca ruk॥१३॥  
vidāhaścānnapānasya tiktāmlōdgiraṇam klamaḥ।  
krōdhapracuratā buddhēḥ sammōhō lavaṇāsyatā॥१४॥  
svēdah śarīradaurgandhyam madaḥ kampah svarakṣayah।  
tandrānidrātiyogaśca tamasaścātidarśanam॥१५॥  
kaṇḍvaruhkōṭhapiḍakākuṣṭhacarmadalādayah।  
vikārāḥ sarva ēvaitē vijñēyāḥ śōṇitāśrayāḥ॥१६॥  
śītōṣṇasnidharūkṣādyairupakrāntāśca yē gadāḥ।  
samyak sādhyā na sidhyanti raktajāṁstān vibhāvayēt॥१७॥  
tataH shoNitajA rogAH prajAyante pRuthagvidhAH।  
mukhapAko~akShirAgashca pUtighrANAsyagandhitA॥१॥  
gulmopakushavīsarparaktapittapramīlakAH।  
vidradhI raktamehashca pradaro vAtashoNitam॥१२॥  
vaivarNyamagnisAdashca pipAsA gurugAtratA।  
santApashcAtidaurbalyamaruciH shirasashca ruk॥१३॥  
vidAhashcAnnapAnasya tiktAmlodgiraNaM klamaH।

krodhapracuratA buddheH sammoho lavaNASyatA||14||  
 svedaH sharIradaurgandhyaM madaH kampaH svarakShayaH|  
 tandrAnidrAtiyogashca tamaśashcAtidarshanam||15||  
 kaNDvaruHkoThapiDakAkuShThacarmadalAdayaH|  
 vikArAH sarva evaite vij~jeyAH shoNitAshrayAH||16||  
 shltoShNasnigdharUkShAdyairupakrAntAshca ye gadAH|  
 samyak sAdhyA na sidhyanti raktajAMstAn vibhAvayet||17||

The above mentioned dietary habits or lifestyle choices cause various diseases that should be considered blood disorders, such as stomatitis, redness in eyes, foul smell in nose and mouth, *gulma* (lump abdomen), *upakusha* (inflammation of gum leads to falling of teeth), erysipelas, bleeding disorder, sleepiness, abscess, hematuria, menorrhagia, *vatarakta*, discoloration of skin, loss of digestive power, thirst, heaviness in body, pyrexia, extreme debility, anorexia, headache, burning sensation after meals, bitter and sour eructation, physical and mental exhaustion, excessive anger, state of confusion, saline taste in mouth, sweating, fetid odor in body, narcosis, tremors, decreased voice, drowsiness, excessive sleep and feeling of darkness, itching, pustules, patches, boils, leprosy, thick skin, etc. The diseases, which, in spite of being curable, are not alleviated after treatment with any of six therapies like cold-hot, unctuous-rough etc. should be considered as caused by (impure) blood. [11-17]

### Management of blood vitiation disorders

कुर्याच्छोणितरोगेषु रक्तपित्तहरीं क्रियाम्।  
 विरेकमुपवासं च सावणं शोणितस्य च॥१८॥  
 kuryācchōṇitarōgēṣu raktaṭittaharīṁ kriyām|  
 virēkamupavāsaṁ ca srāvaṇaṁ śōṇitasya ca||18||  
 kuryAcchoNitarogeShu raktaṭittaharIM kriyAm|  
 virekamupavAsaM ca srAvaNaM shoNitasya ca||18||

Treatment for blood disorder is as per *raktaṭitta* with therapeutic purgation, fasting and bloodletting. [18]

### Extent of bloodletting

बलदोषप्रमाणाद्वा विशुद्ध्या रुधिरस्य वा।  
 रुधिरं सावयेऽजन्तोराशयं प्रसमीक्ष्य वा॥१९॥  
 baladōṣapramāṇādvā viśuddhyā rudhirasya vā|

rudhiram sravayejjantorāśayam prasamīkṣya vā||19||

baladoShapramANAdvA vishuddhyA rudhirasya vA|

rudhiraM srAvayejjantorAshayaM prasamlkShya vA||19||

Bloodletting should be done considering the strength of the person, dosha, location of the disease, and until pure blood starts to flow out.[19]

### Dosha-specific features of vitiated blood

अरुणाभं भवेद्वाताद् विशदं फेनिलं तनु|

पित्तात् पीतासितं रक्तं स्त्यायत्यौष्ण्याच्चिरेण च|२०||

ईषत्पाण्डु कफाददुष्टं पिच्छिलं तन्तुमदघनम्|

संसृष्टलिङ्गं संसर्गात्त्रिलिङ्गं ||२१||

arunābhām bhavēdvātādviśadām phēnilām tanu|

pittāt pītāsitām raktām styāyatyausnyāccirēṇa ca||20||

त्षत्पाण्डु कप्हाद्दुष्टाम् picchilām tantumadghanam|

सांस्रष्टलिङ्गम् सांसर्गात्त्रिलिङ्गम् सान्निपातिकम्||२१||

aruNAbhaM bhavedvAtAdvishadaM phenilaM tanu|

pittAt pltAsitaM raktaM styAyatyauShNyAccireNa ca||20||

IShatpANDu kaphAdduShTaM picchilaM tantumadghanam|

saMsRuShTali~ggaM saMsargAttrili~ggaM sAnnipAtikam||२१||

Due to vitiated *vata*, blood becomes arunabham (reddish), non-slimy, frothy and thin.

Due to vitiated *pitta*, it becomes yellow or blackish, with delayed coagulation because of heat. Due to vitiated *kapha* it is slightly pale, slimy, fibrous and more viscous. In the case of combination of vitiated *doshas*, it acquires mixed characters and in *sannipata*, has symptoms of all the three *doshas*.[20-21]

### Characteristics of pure blood

तपनीयेन्द्रगोपाभं पद्मालक्तकसन्निभम्|

गुञ्जाफलसवर्णं च विशुद्धं विद्धि शोणितम्||२२||

tapanīyēndragōpābhām padmālaktakasannibham|

guñjāphalasavarṇām ca viśuddhām viddhi śōṇitam||22||

tapanlyendragopAbhaM padmAlaktakasannibham|

gu~jjAphalasavarNaM ca vishuddhaM viddhi shoNitam||22||

Blood should be regarded as pure when its color resembles red-gold, firefly, red lotus, *laksha* (lac-resinous material) and *gunja* fruit (*Abrus precatorius Linn.*).[22]

### Diet after bloodletting

नात्युष्णशीतं लघु दीपनीयं रक्तेऽपनीते हितमन्नपानम्।

तदा शरीरं ह्यनवस्थितासृगग्निर्विशेषेण च रक्षितव्यः॥२३॥

nātyuṣṇaśītaṁ laghu dīpanīyaṁ raktē'panītē hitamannapānam|

tadā śarīraṁ hyanavasthitāśṛgagnirviśeṣena ca rakṣitavyah||23||

nAtyuShNashItaM laghu dlpanlyaM rakte~apanlte hitamannapAnam|

tadA sharIraM hyanavasthitAsRugagnirvisheSheNa ca rakShitavyaH||23||

After bloodletting, it is beneficial to take diet that is neither too hot nor cold, is light (to digest), and is appetizing. During this period, the body is vulnerable to relapse of various other forms of blood-related diseases, so the agni(digestive power) should be protected with care. [23]

### Characteristics of a person with pure blood

प्रसन्नवर्णन्द्रियमिन्द्रियार्थानिच्छन्तमव्याहतपक्तवेगम्।

सुखान्वितं तु(पु)ष्टिबलोपपन्नं विशुद्धरक्तं पुरुषं वदन्ति॥२४॥

prasannavarṇēndriyamindriyārthānicchantamavyāhatapaktrvēgam|

sukhānvitaṁ tu(pu)ṣṭibalōpapannaṁ viśuddharaktaṁ puruṣaṁ vadanti||24||

prasannavarNendriyamindriyArthAnicchantamavyAhatapaktRuvegam|

sukhAnvitaM tu(pu)ShTibalopapannaM vishuddharaktaM puruShaM vadanti||24||

A person should be considered as having pure blood if he has glowing complexion, well-functioning sense organs, and is cheerful. A person with unvitiated blood has normal digestion and unobstructed natural urges, is happy and is endowed with saturation and strength. [24]

### Causative factors and pathogenesis of mada (intoxication), murchcha (syncope) and sanyasa(coma)

यदा तु रक्तवाहीनि रससञ्जावहानि च।

पृथक् पृथक् समस्ता वा स्रोतांसि कुपिता मलाः॥२५॥

मलिनाहारशीलस्य रजोमोहावृतात्मनः।

प्रतिहत्यावतिष्ठन्ते जायन्ते व्याधयस्तदा॥२६॥  
मदमूर्च्छायसन्न्यासास्तेषां विद्याद् विचक्षणः।  
यथोत्तरं बलाधिक्यं हेतुलिङ्गोपशान्तिषु॥२७॥  
दुर्बलं चेतसः स्थानं यदा वायुः प्रपद्यते।  
मनो विक्षोभयञ्जन्तोः सञ्जां सम्मोहयेतदा॥२८॥  
पित्तमेवं कफश्चैवं मनो विक्षोभयन्नुणाम्।  
सञ्जां नयत्याकुलतां विशेषश्चात्र वक्ष्यते॥२९॥  
yadā tu raktavāhīni rasasañjñāvahāni ca|  
pr̥thak pr̥thak samastā vā srōtāṁsi kūpitā malāḥ॥२५॥  
malināhāraśīlasya rajōmōhāvṛtātmanah|  
pratihatyāvatiṣṭhantē jāyantē vyādhayastadā॥२६॥  
madamūrcchāyasannyāsāstēśāṁ vidyādvicakṣanah|  
yathōttaram balādhikyaṁ hētuliṅgōpaśāntiṣu॥२७॥  
durbalaṁ cētasah sthānaṁ yadā vāyuḥ prapadyatē|  
manō vikṣōbhayañjantōḥ sañjñāṁ sammōhayēttadā॥२८॥  
pittamevaṁ kaphaścaivam manō vikṣōbhayannruṇām|  
sañjñāṁ nayatyākulatāṁ viśeṣāścātra vakṣyatē॥२९॥  
yadA tu raktavAhIni rasasajjAvahAni ca|  
pRuthak pRuthak samastA vA srotAMsi kuptA malAH॥२५॥  
malinAhArashIasya rajomohAvRutAtmanaH|  
pratihatyAvatiShThante jAyante vyAdhayastadA॥२६॥  
madamUrcchAyasannyAsAsteShAM vidyAdvicakShaNaH|  
yathottaraM balAdhikyaM hetuli~ggopashAntiShu॥२७॥  
durbalaM cetasaH sthAnaM yadA vAyuH prapadyate|  
mano vikShobhaya~jjantoH sajjAM sammohayettadA॥२८॥  
pittamevaM kaphashcaivaM mano vikShobhayannRuNAm|  
saJJAM nayatyAkulatAM visheShashcAtra vakShyate॥२९॥

When a person indulges in spoiled food and unhealthy habits, he develops a clouded sensorium with *rajas* and *tamas* qualities. The vitiated dosha, singly or in combination, reside and obstruct the channels that carry rakta, rasa (plasma), and consciousness. This leads to various diseases such as *mada* (intoxication), *murchcha* (syncope), and *sanyasa* (coma) which are etiologically, symptomatically and therapeutically progressive. Vitiated dosha distress the mind and alter the sensorium leading to further impairment of consciousness. [25-29]

### Dosha specific features of *mada* (intoxication)

सक्तानल्पद्रुताभाषं चलस्खलितचेष्टितम्।  
विद्याद् वातमदाविष्टं रूक्षश्यावारुणाकृतिम्॥३०॥  
सक्रोधपरुषाभाषं सम्प्रहारकलिप्रियम्।  
विद्यात् पित्तमदाविष्टं रक्तपीतासिताकृतिम्॥३१॥  
स्वल्पासम्बद्धवचनं तन्द्रालस्यसमन्वितम्।  
विद्यात् कफमदाविष्टं पाण्डुं प्रध्यानतत्परम्॥३२॥  
सर्वाण्येतानि रूपाणि सन्निपातकृते मदे॥३३॥  
saktānalpadrutābhāṣam calaskhalitacēṣṭitam |  
vidyādvātāmadāviṣṭam rūkṣaśyāvāruṇākṛtim||30||  
sakrōdhaparuṣābhāṣam samprahārakalipriyam|  
vidyāt pittamadāviṣṭam raktapītāsitākṛtim||31||  
svalpāsambaddhvacaṇam tandrālasyasamanvitam|  
vidyāt kaphamadāviṣṭam pāṇḍuram pradhyānataparam||32||  
sarvāṇyētāni rūpāṇi sannipātakṛtē madē|33|  
saktAnalpadrutAbhAShaM calaskhalitaceShTitam |  
vidyAdvAtamadAviShTaM rUkShashyAvAruNAkRutim||30||  
sakrodhaparuShAbhAShaM samprahArakalipriyam|  
vidyAt pittamadAviShTaM raktaplItAsitAkRutim||31||  
svalpAsambaddhvacaṇaM tandrAlasyasamanvitam|  
vidyAt kaphamadAviShTaM pANDuM pradhyAnataparam||32||  
sarvANyetAni rUpANI sannipAtakRute made|33|

The person should be diagnosed as suffering from *vatika mada*, if his speech is excessive and fast, movement is unstable, and face is rough, reddish or blackish. A person with angry and harsh tongue, quarrelsome, tends to be physical with a red, yellow and black face should be known to be suffering from *paittika mada*. The one affected with kaphaja madaspeaks less with incoherence, seems drowsy and lethargic, is pale and is continuously in a state of anxiety. *Insannipataja mada*”, all these features are found in combination. [30-33]

जायते शाम्यति क्षिप्रं मदो मद्यमदाकृतिः॥३३॥

jāyatē śāmyati kṣiprāṁ madō madyamadākṛtiḥ॥३३॥

jAyate shAmyati kShipraM mado madyamadAkRutiH॥३३॥

The *mada* state arises and subsides quickly like alcoholic narcosis. [33]

यश्च मद्यकृतः प्रोक्तो विषजो रौधिरश्च यः।

सर्व एते मदा नर्ते वातपितकफत्रयात्॥३४॥

yaśca madyakṛtaḥ prōktō viṣajō raudhiraśca yaḥ|

sarva ētē madā nartē vātapittakaphatrayāt॥३४॥

yashca madyakRutaH prokto viShajo raudhirashca yaH|

sarva ete madA narte vAtapittakaphatrayAt॥३४॥

All types of narcosis are caused by alcoholic drinks, poisons or by vitiation of blood. It can be concluded that all types of narcosis are caused by nothing but the vitiation of the three dosha viz. vata, pitta and kapha. [34]

### Specific features of dosha dominant *murchcha* (syncope)

नीलं वा यदि वा कृष्णमाकाशमथवाऽरुणम्।

पश्यन्स्तमः प्रविशति शीघ्रं च प्रतिबुद्ध्यते ॥३५॥

वेष्ट्युश्चाङ्गमर्दश्च प्रपीडा हृदयस्य च।

काश्यं श्यावारुणा च्छायामूर्च्छाये वातसम्भवे॥३६॥

रक्तं हरितवर्णं वा वियत् पीतमथापि वा।

पश्यन्स्तमः प्रविशति सस्वेदः प्रतिबुद्ध्यते॥३७॥

सपिपासः ससन्तापो रक्तपीताकुलेक्षणः।

सम्भन्नवर्चा: पीताभो मूर्च्छाये पित्तसम्भवे॥३८॥

मेघसङ्काशमाकाशमावृतं वा तमोघनैः।

पश्यन्स्तमः प्रविशति चिराच्च प्रतिबुद्ध्यते॥३९॥

गुरुभिः प्रावृत्तैरङ्गैर्यथैवार्द्धणं चर्मणा।  
सप्रसेकः सहृल्लासो मूर्छ्ये कफसम्भवे॥४०॥

सर्वकृतिः सन्निपातादपस्मार इवागतः।  
स जन्तुं पातयत्याशु विना बीभत्सचेष्टिते॥४१॥

nīlam vā yadi vā kṛṣṇamākāśamathavā'rūṇam|  
paśyāṁstamaḥ praviśati śīghram ca pratibudhyatē ||35||

vēpathuścāṅgamardaśca prapīḍā hṛdayasya ca|  
kārśyam śyāvāruṇā cchāyāmūrcchāyē vātasambhavē||36||

raktam haritavarṇam vā viyat pītāmathāpi vā|  
paśyāṁstamaḥ praviśati sasvēdah pratibudhyatē||37||

sapiṇāsaḥ sasantāpō raktapīṭakulēkṣaṇaḥ|  
sambhinnavarcāḥ pītābhō mūrcchāyē pittasambhavē||38||

mēghasaṅkāśamākāśamāvṛtaṁ vā tamōghanaiḥ|  
paśyāṁstamaḥ praviśati cirācca pratibudhyatē||39||

gurubhiḥ prāvṛtairaṅgairyathaivārdrēṇa carmaṇā|  
saprasēkaḥ sahṛllāsō mūrcchāyē kaphasambhavē||40||

sarvākṛtiḥ sannipātādapasmāra ivāgataḥ|  
sa jantum pātayatyāśu vinā bībhatsacēṣṭitaiḥ||41||

nīlaM vA yadi vA kRuShNamAkAshamathavA~aruNam|  
pashyaMstamaH pravishati shlighraM ca pratibudhyate ||35||

vepathushcA~ggamardashca prapIDA hRudayasya ca|  
kArshyaM shyAvAruNA cchAyAmUrcchAye vAtasambhave||36||

raktaM haritavarNaM vA viyat pltamathApi vA|  
pashyaMstamaH pravishati sasvedaH pratibudhyate||37||

sapiṇAsaH sasantApo raktapīṭakulekShaNaH|  
sambhinnavarcAH pltAbho mUrcchAye pittasambhave||38||

meghasa~gkAshamAkAshamAvRutaM vA tamoghanaiH|  
pashyaMstamaH pravishati cirAcca pratibudhyate||39||

gurubhiH prAvRutaira~ggairyathaivArdreNa carmaNA|  
 saprasekaH sahRullAso mUrcchAye kaphasambhave||40||  
 sarvAkRutiH sannipAtAdapasmAra ivAgataH|  
 sa jantuM pAtayatyAshu vinA blbhatsaceShTitaiH||41||

In *vatika murchcha*, the patient becomes unconscious after seeing the sky as blue, black or reddish and regains consciousness quickly. Other symptoms include trembling, body-ache, excessive pain in the cardiac region, emaciation, and blackish and reddish luster. In *paitika murchcha*, unconsciousness comes after seeing the sky as red, green or yellow, and recovery is accompanied by sweating. There are also symptoms like thirst, pyrexia, red or yellow distressed eyes, loose motion, and yellowish pallor.

The patient of kaphaja murchcha gets unconscious after seeing the sky covered in clouds or covered with deep darkness and recovers after a long time. He generally finds his body parts feel heavy and wrapped in wet hide. He also suffers from excessive salivation and nausea.

*Sannipataja murchcha* has characters of all the above types and the patient suffers from (epilepsy-like) bouts of paroxysm, with the difference that in this *murchcha* the patient falls unconscious without violent or revolting movements.[35-41]

### Sanyasa (coma)

दोषेषु मदमूर्च्छायाः कृतवेगेषु देहिनाम्।  
 स्वयमेवोपशाम्यन्ति सन्न्यासो नौषधैर्विना॥४२॥  
 वाग्देहमनसां चेष्टामाक्षिप्यातिबला मलाः।  
 सन्न्यस्यन्त्यबलं जन्तुं प्राणायतनसंश्रिताः॥४३॥  
 स ना सन्न्याससन्न्यस्तः काष्ठीभूतो मृतोपमः।  
 प्राणैर्वियुज्यते शीघ्रं मुक्त्वा सद्यःफलाः क्रियाः॥४४॥  
 दुर्गेऽम्भसि यथा मज्जदभाजनं त्वरया बुधः।  
 गृहणीयात्लमप्राप्तं तथा सन्न्यासपीडितम्॥४५॥  
 अञ्जनान्यवपीडाश्च धूमाः प्रधमनानि च।  
 सूचीभिस्तोदनं शस्तं दाहः पीडा नखान्तरे॥४६॥  
 लुञ्चनं केशलोम्नां च दन्तैर्दशनमेव च।  
 आत्मगुप्तावघर्षश्च हितं तस्यावबोधने॥४७॥  
 सम्मूर्च्छितानि तीक्षणानि मद्यानि विविधानि च।

प्रभूतकटुयुक्तानि तस्यास्ये गालयेन्मुहः||४८||  
मातुलुङ्गरसं तद्वन्महौषधसमायुतम्।  
तद्वत्सौवर्चलं दद्याद्युक्तं मद्याम्लकाञ्जिकैः॥४९॥  
हिङ्गूषणसमायुक्तं यावत् सञ्जाप्रबोधनम्।  
प्रबुद्धसञ्जमन्नैश्च लघुभिस्तमुपाचरेत्॥५०॥  
विस्मापनैः स्मारणैश्च प्रियश्रुतिभिरेव च।  
पटुभिर्गीतवादित्रशब्दैश्चित्रैश्च दर्शनैः॥५१॥  
संसनोल्लेखनैर्धूमेरञ्जनैः कवलग्रहैः।  
शोणितस्यावसेकैश्च व्यायामोद्घर्षणैस्तथा॥५२॥  
प्रबुद्धसञ्जं मतिमाननुबन्धमुपक्रमेत्।  
तस्य संरक्षितव्यं हि मनः प्रलयहेतुतः॥५३॥

dōśēṣu madamūrcchāyāḥ kṛtavēgēṣu dēhinām|  
svayamēvōpaśāmyanti sannyāsō nauśadhairvinā||42||  
vāgdēhamanasāṁ cēṣṭāmākṣipyātībalā malāḥ|  
sannyasyantyabalaṁ janturṁ prāṇāyatanaśāṁśritāḥ||43||  
sa nā sannyāsasannyastāḥ kāṣṭhībhūtō mṛtōpamaḥ|  
prāṇairviyujyatē śīghraṁ muktvā sadyaḥphalāḥ kriyāḥ||44||  
durgē'mbhasi yathā majjadbhājanam tvarayā budhaḥ|  
gr̥hṇīyāttalamaprāptam tathā sannyāsapīḍitam||45||  
añjanānyavapīḍāśca dhūmāḥ pradhamanāni ca|  
sūcībhīstōdanam ūastam dāhaḥ pīḍā nakhāntarē||46||  
luñcanam kēśalōmnāṁ ca dantairdaśanamēva ca|  
ātmaguptāvagharaśaśca hitam tasyāvabōdhanē||47||  
sammūrcchitāni tīkṣṇāni madyāni vividhāni ca|  
prabhūtakaṭuyuktāni tasyāsyē gālayēnmuhuḥ||48||  
mātuluṅgarasam ūadvanmahauṣadhasamāyutam|  
tadvatsauvarcalam dadyādyuktam madyāmlakāñjikaiḥ||49||  
hiṅgūṣaṇasamāyuktam yāvat sañjñāprabōdhanam|

prabuddhasañjñamannaiśca laghubhistamupācarēt||50||  
vismāpanaiḥ smāraṇaiśca priyaśrutibhirēva ca|  
paṭubhīrgītavāditraśabdaiścitraiśca darśanaiḥ||51||  
srar̥sanōllēkhanairdhūmairañjanaiḥ kavalagrahaiḥ|  
śōṇitasyāvasēkaiśca vyāyāmōdgharṣaṇaistathā||52||  
prabuddhasañjñam matimānanubandhamupakramēt|  
tasya amṛakṣitavyam hi manah pralayahētutah||53||  
doSheShu madamUrcchAyAH kRutavegeShu dehinAm|  
svayamevopashAmyanti sannyAso nauShadhairvinA||42||  
vAgdehamanasAM ceShTAmAkShipyAtibalA malAH|  
sannyasyantyabalaM jantuM prANAyatanasaMshritAH||43||  
sa nA sannyAsasannyastaH kAShThlbhUto mRutopamaH|  
prANairviyujyate shlighraM muktvA sadyaHphalAH kriyAH||44||  
durge~ambhasi yathA majjadbhAjanaM tvarayA budhaH|  
gRuhNIlyAttalamaprAptaM tathA sannyAsapIDitam||45||  
a~jjanAnyavapIDAshca dhUmAH pradhamanAni ca|  
sUclbhistoranaM shastaM dAhaH pIDA nakhAntare||46||  
lu~jcanaM keshalomnAM ca dantairdashanameva ca|  
AtmaguptAvagharShashca hitaM tasyAvabodhane||47||  
sammUrcchitAni tlkShNAni madyAni vividhAni ca|  
prabhUtakaTuyuktAni tasyAsye gAlayenmuhuH||48||  
mAtulu~ggarasam tadvanmahauShadhasamAyutam|  
tadvatsauvarcalaM dadyAdyuktaM madyAmlakA~jjikaiH||49||  
hi~ggUShaNasamAyuktaM yAvat sajjAprabodhanam|  
prabuddhasaṁjamannaishca laghubhistamupAcaret||50||  
vismApanaiH smAraNaishca priyashrutibhireva ca|  
paTubhirgītavAditrashabdaishcitraishca darshanaiH||51||  
sraMsanollekhanairdhUmaira~jjanaiH kavalagrahaiH|

shoNitasyAvasekaishca vyAyAmodgharShaNaistathA||52||

prabuddhasa<sub>jj</sub>jaM matimAnanubandhamupakramet|

tasya saMrakShitavyaM hi manaH pralayahetutaH||53||

*Mada* and *murchcha* subside on their own when the vitiated *doshas* subside. However, *sanyasa* (coma) does not subside without medical treatment. In weak patients, when vitiated *doshas* move into a vital organ (i.e. brain and heart) and start affecting speech, physical movement, and the mind, coma ensues. A person affected with coma appears to be in a vegetative state or seems dead. Death can occur if prompt and effective treatment is not given. The physician should manage a comatose patient just as a wise person recovers a utensil sinking in deep water quickly before it settles down in the bottom.

To make someone recover from coma, the use of collyrums, drops, smokes, blowing, needling, burning, causing pain by making the patient lie on a nail-bed, plucking the hair on the head and body of the patient, biting the patient, rubbing with hairy fruits of *atmagupta* (*Mucuna prurita* Hook.) is recommended and considered effective. Besides, various types of strong alcoholic drinks mixed with plenty of pungent substances should be poured into the mouth of the patient suffering from *murchcha* (syncope). Similarly, the juice of *matulunga rasa* (*Citrus medica*) mixed with dry ginger, *sauvarchala* (black salt), *hingu* (ie. resinous of material *Ferula foetida* Regel), wine, and sour juice or vinegar should be administered for helping someone regain consciousness.

When the patient regains consciousness, he should be given a light diet and should be entertained with interesting stories or anecdotes, memoirs, pleasing talks, enchanting songs, and live music, and colorful scenery. Moreover, he should be treated with purgation, emesis, smoking, collyrums, gargles, bloodletting, exercise and rubbing over the body. His mind should be protected well from the causes of distress or confusion.  
[42-53]

### Various treatments of *mada* and *murchcha*

स्नेहस्वेदोपपन्नानां यथादोषं यथाबलम्।

पञ्च कर्माणि कुर्वीत मूर्च्छायेषु मदेषु च॥५४॥

अष्टाविंशत्यौषधस्य तथा तिक्तस्य सर्पिषः।

प्रयोगः शस्यते तद्वन्महतः षट्पलस्य वा॥५५॥

त्रिफलायाः प्रयोगो वा सघृतक्षौद्रशर्करः।

शिलाजतुप्रयोगो वा प्रयोगः पयसोऽपि वा॥५६॥

पिप्पलीनां प्रयोगो वा पयसा चित्रकस्य वा।

रसायनानां कौम्भस्य सर्पिषो वा प्रशस्यते॥५७॥

रक्तावसेकाच्छास्त्राणां सतां सत्त्ववतामपि।  
 सेवनान्मदमूर्च्छायाः प्रशाम्यन्ति शरीरिणाम्॥५८॥  
 snēhasvēdōpapannānāṁ yathādōṣam yathābalam|  
 pañca karmāṇi kurvīta mūrcchāyēṣu madēṣu ca||54||  
 aṣṭāvīṁśatyausadhasya tathā tiktasya sarpiṣah|  
 prayogaḥ śasyatē tadvanmahataḥ ṣaṭpalasya vā||55||  
 triphalāyāḥ prayogō vā saghṛtakṣaudraśarkaraḥ|  
 śilājatuprayogō vā prayogaḥ payasō’pi vā||56||  
 pippalīnāṁ prayogō vā payasā citrakasya vā|  
 rasāyanānāṁ kaumbhasya sarpiṣō vā praśasyatē||57||  
 raktāvasēkācchāstrāṇāṁ satāṁ sattvavatāmapi|  
 sēvanānmadamūrcchāyāḥ praśāmyanti śarīriṇām||58||  
 snehasvedopapannAnAM yathAdoShaM yathAbalam|  
 pa~jca karmANi kurvIta mUrcchAyeShu madeShu ca||54||  
 aShTAviMshatyauShadhasya tathA tiktasya sarpiShaH|  
 prayogaH shasyate tadvanmahataH ShaTpalasya vA||55||  
 triphalAyAH prayogo vA saghRutakShaudrasharkaraH|  
 shilAjatuprayogo vA prayogaH payaso~api vA||56||  
 pippallInAM prayogo vA payasA citrakasya vA|  
 rasAyanAnAM kaumbhasya sarpiSho vA prashasyate||57||  
 raktAvasekAcchAstrANAM satAM sattvavatAmapi|  
 sevanAnmadamUrcchAyAH prashAmyanti sharIriNAm||58||

In the cases of *mada* and *murchha*, patients should be subjected to five (evacuative) measures, after proper oleation and fomentation, according to the *dosha* and strength of the person and the disease. Likewise, the administration of *paniya-kalyana ghrita*, *tiktashatpala ghrita* or *mahatikta ghrita* is recommended. The use of *triphalā* with *ghrita*, honey and sugar, *shilajatu*, milk, *pippali* (*Piper longum*) or *chitraka* (*Plumbago zeylanica Linn.*) with milk, *rasayana*, and *kaumbha* (ten year old) *ghrita* are also beneficial.

*Mada* and *murchcha* are alleviated by bloodletting and constantly keeping the patient regaled with anecdotes from the scriptures, and in the company of noble and intelligent persons. [54-58]

## Summary

तत्र श्लोकौ-

विशुद्धं चाविशुद्धं च शोणितं तस्य हेतवः।  
रक्तप्रदोषजा रोगास्तेषु रोगेषु चौषधम्॥५९॥  
मदमूर्च्छायसन्न्यासहेतुलक्षणभेषजम्।  
विधिशोणितकेऽद्याये सर्वमेतत् प्रकाशितम्॥६०॥

tatra ślōkau-

viśuddhaṁ cāviśuddhaṁ ca śōṇitarṁ tasya hētavah|  
raktapradōṣajā rōgastēṣu rōgēṣu cauṣadham||59||  
madamūrcchāyasyānnyāsaḥētulakṣaṇabhēṣajam|  
vidhiśōṇitakē'dhyāyē sarvamētat prakāśitam||60||

tatra shlokau-

vishuddhaM cAvishuddhaM ca shoNitaM tasya hetavaH|  
raktapradoShajA rogAsteShu rogeShu cauShadham||59||  
madamUrcchAyasyAsahetulakShaNabheShajam|  
vidhishoNitake~adhyAye sarvametat prakAshitam||60||

Now the (summing up) verses-

Characteristics of pure and impure blood, its causes, disorders of blood and their treatment, causes, symptoms and treatment of *mada*, *murchcha* and *sanyasa* – all this has been described in the chapter on properly formed blood etc. Diseases with variable state of consciousness, from confusion to coma have been described in this chapter. [59-60]

## Tattva Vimarsha (Fundamental Principles)

- Formation of pure blood depends upon the place, time, diet, and lifestyle. [3]
- Pureblood is one of ten vital components of the body. [4]
- Katu*,(pungent) *amla* (sour), *lavana* (salty), *ushna* (hot) foods, excessive anger, excessive food, exposure to sun & fire, trauma and autumn season are main causes of raktaja vikara. All diet and lifestyle factors responsible for pitta vitiation can cause vitiation of blood. [5-10]

- Treatment of blood vitiation disorders is like *raktapitta* with purgation, fasting, and bloodletting. [18]
- The extent of bloodletting is decided according to the severity of the disease, location of the disease, and strength of the patient.[19]
- Vata and pitta increase bleeding and delay blood-clotting while kapha does the opposite.[20-21]
- A person should take digestion-enhancing diet consisting of *shali* (red rice), *moong* (green gram), etc. to strengthen digestive power after bloodletting. [23]
- *Mada*, *murchcha*, and *sanyasa* are caused due to vitiated doshas as well as *rajas* and *tamas*, which impair and obstruct rasavaha, raktavaha, and *sangyavahi srotas*. They are responsible for various states of consciousness. Altered sensorium and consciousness are caused by consumption of contaminated diet and conduct. Mind and body are equally involved in the pathology of intoxication, syncope, and coma. [25-29]
- *Mada* and *madatyaya* are clinically interchangeable. All types of narcosis and intoxication are caused by the vitiation of the three *doshas*.[34]
- *Murchcha* is a transient loss of consciousness with prodromal visual hallucinations specific to vata, pitta, and kapha. [35-41]
- *Mada* and *murchcha* are mostly self-limiting conditions in which spontaneous recovery occurs most of the time. *Sanyasa* requires intensive management. [42-53]
- Purification of channels through Panchakarma is indicated before administration of drugs.[54-58]

## Vidhi Vimarsha (Applied Inferences)

### Chapter on formation of blood and its disorders (Vidhishonitiya Adhyaya)

Blood tissue (rakta dhatus) is essential component of life. It is continuously circulated throughout the body and supplies oxygen and nutrients to cells. Formation of blood mainly depends upon the food that is in accordance with the habitat (desh), season and time (kala) and suitability (satmya) of the individual. The normal formation and circulation of blood maintains equilibrium in the cardio-vascular system and end organs. Any kind of abnormality like impaired growth and development of blood cells, inflammation, trauma, changes in oncotic pressure, internal bleeding leads to disequilibrium and disease. Advanced modern technologies are helpful to identify and diagnose exact nature of abnormalities. However, the causative factors for these abnormalities need more research and analysis. This chapter opens new windows to learn about causes of abnormalities, non-invasive observational methods of assessment, its role in cerebrovascular disorders like syncope and coma.

### Examination of normal blood

The normalcy of blood is assessed on the basis of its observational features.

The normal blood resembles the color of heated red gold, firefly (indragopa), red lotus, lac (laksha) or Abrus precatorius fruit (gunja).[Cha.Sa.Sutra Sthana 24/22] As blood cells mature, their red color may change to different shades from heated gold to gunja color. Different dosha and body constitution (deha prakriti) may also be responsible for different shades of red color of blood.<sup>196</sup> The color of human blood resembles to that of sheep and rabbit.

### Characteristic features of a person with normal blood tissue

The person having normal blood, possesses good complexion, clarity of sense organs, cheerful nature, normal digestion, unobstructed natural urges and has good strength. [Cha.Sa.Sutra Sthana 24/24] It can be inferred that blood plays key role in maintaining these physiological functions.

Contemporary physiology states that the color of blood depends on hemoglobin percentage (Hb%). The clotting time represents coagulation, and packed cell volume etc. can be viewed in terms of thickness of blood.<sup>197</sup>

### Dosha specific features of blood

When the blood tissue is vitiated by dosha, it shows following features.

| Dosha | Features                             |
|-------|--------------------------------------|
| Vata  | Reddish, non-slimy, frothy and thin  |
| Pitta | Yellow/blackish, delayed coagulation |
| Kapha | Slight pale, slimy, fibrous, viscous |

Table 1: Dosha specific features of blood

[Cha.Sa.Sutra Sthana 24/20]

If the blood is vitiated by more than one dosha, it shows mixed features. The features can be inferred on the basis of pathological parameters like packed cell volume, coagulations factors and viscosity. Robust research is required to establish the relation between dosha specific changes in blood tissue.

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<sup>196</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>197</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

When the blood is vitiated, it can cause various diseases ranging from mouth ulcer to coma.<sup>198</sup>

## Causes of vitiation of blood

### Dietary causes:

- Habitual intake of spoiled or unsuitable food and/or liquids
- Overeating
- Acidic or pungent liquor and other similar drinks
- Too much salty, alkaline substances, sour and pungent food
- Dolichos biflorus Linn. (Kulatha)
- Phaseolus mungo Linn. (Masha)
- Dolichos lablab Linn. (Nishpava)
- Sesamum indicum Linn. oils (Tila taila)
- Randia uliginosa DC. (Pindalu)
- Radish and all green (leafy) vegetables
- Meat of aquatic and marshy animals, burrowing animals and those animals that snatch birds
- Excessive intake of curd, sour whey (curd-water), vinegars and other sour fermented liquids
- Consuming decomposed, putrid food with contradictory properties
- Untreated indigestion
- Taking meal during indigestion

### Lifestyle causes:

- Excessive sleeping during daytime especially after taking liquids, unctuous and heavy food
- Excessive exposure to the sun and wind
- Suppression of the natural urges like vomiting
- Avoidance of blood-letting at appropriate indicated time or in the autumn season when the blood is affected due to natural aggravation of pitta dosha
- Excess exertion
- Injury
- Exposure to heat

### Mental factors:

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<sup>198</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

- Excessive anger

### **Environmental conditions:**

- Autumn season due to natural aggravation of pitta dosha [Cha.Sa.Sutra Sthana 24/5-10]

### **Clinical features of abnormal blood**

Abnormalities in the blood can be diagnosed by observing following clinical features in an individual. These features suggest involvement of organs and body systems affected by abnormal blood.

- Stomatitis
- Redness in eyes
- Foul smell in nose and mouth (halitosis)
- Abdominal lump (gulma)
- Gingivitis, periodontitis and tooth loss (upakusha)
- Erysipelas (visarpa)
- Bleeding disorders
- Sleepiness
- Abscess
- Hematuria
- Menorrhagia
- Vatarakta
- Discoloration of skin
- Poor digestive capacity
- Excess thirst
- Heaviness in body
- Increased body temperature and mental irritation
- Extreme debility
- Anorexia
- Headache
- Burning sensation after meals
- Bitter and sour eructation
- Physical and mental exhaustion
- Excessive anger
- State of confusion
- Saline taste in mouth
- Excess sweating
- Fetid body odor
- Narcosis or intoxication
- Tremors

- Feeble voice
- Drowsiness
- Hypersomnia
- Fainting and black outs
- Pruritus
- Pustules
- Boils
- Skin disorders
- Thick skin as in scleroderma and ichthyosis vulgaris
- All diseases that are not relieved by conventional treatment

## Principles of treatment

The principles of treatment of these conditions include one or all of the following depending upon the clinical condition.

- The principles applied for pacification of pitta dosha and rakta dhatu. These are described in management of bleeding disorders (raktapitta) in fourth chapter of section on therapeutics (Chikitsa Sthana).
- Therapeutic purgation (virechana)
- Fasting (upavasa)
- Blood letting (rakta mokshana)

## Intoxication (mada), Syncope (murchha) and Coma (sanyasa)

If these treatments are not followed at appropriate time, then the abnormal blood can lead to severe disorders like intoxication, syncope and coma. These three are progressive stages of diseases due to vitiation of blood. Intoxication (mada) state may arise due to consumption of alcohol, poisoning or due to vitiation of blood. The person may be semiconscious or in an altered state of consciousness. [Su.Sa.Sutra Sthana.11/19]<sup>199</sup> In murchha, the person may be unconscious but involuntary physical movements might be present.[Su.Sa.Nidhana Sthana.1/23]<sup>200</sup> Sanyasa is a condition in which the person will remain unconscious and also there won't be any physical movements.[Cha.Sa.Sharira Sthana 1/154]

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<sup>199</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin 2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

<sup>200</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

## *Intoxication (mada)*

### Pathogenesis

If an individual continuously indulges in stale foods and unhealthy/unhygienic habits, the dosha are vitiated at physical and mental level. His mind gets afflicted with raja and tama. The vitiated dosha obstructs channels carrying nutrient fluid (rasa), blood (rakta) and consciousness (sanjna). This causes altered state of consciousness resulting in intoxication (mada), syncope (murchcha) and coma (sanyasa). [Cha.Sa.Sutra Sthana 24/24-29] Weak minded persons are more susceptible if exposed to vitiation of tridosha (vata/pitta/kapha) separately or in combination. [Cha.Sa.Sutra Sthana 24/28]

### Stages of intoxication (mada)

Three stages of intoxication (mada) are mentioned. In initial stage the person will be over enthusiastic. [Su.Sa.Uttara Sthana. 47/11]<sup>201</sup> In the second stage person may talk irrelevantly and will be in delusion stage. In the final stage the person lies unconscious. He may loose his ability to perform any physical action. [Su.Sa.Uttara Sthana. 47/12]<sup>202</sup>

### Types and dosha specific features of intoxication (mada)

| Dosha           | Features of intoxication   |
|-----------------|--|
| Vata            | Excessive and fast speech; unstable movements; rough, reddish or blackish skin discoloration |
| Pitta           | Angry; uses harsh words; quarrelsome; reddish, yellowish or blackish skin discoloration      |
| Kapha           | Incoherent speech; drowsy and lethargic; pale appearance                                     |
| Sannipata       | Mixed symptoms   |
| Blood (rakta)   | Stiffness of body parts, fixed gaze [A.Hr. Nidhana Sthana. 6/28] <sup>203</sup>              |
| Alcohol (madya) | Features similar to pitta dominant type, abnormal movements of body                          |

<sup>201</sup> Sushruta. Uttara Tantra, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. Sushruta Samhita. 8th ed. Varanasi: Chaukhambha Orientalia;2005.

<sup>202</sup> Vaghbhata. Uttara Sthana, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. Ashtanga Hridayam. 1st ed. Varanasi: Krishnadas Academy;2000.

|                |  |
|----------------|--|
| Dosha          | Features of intoxication<br>parts, abnormal speech, abnormal voice [A.Hr. Nidhana Sthana. 6/29] <sup>204</sup> |
| Poison (visha) | Tremors and excessive sleep<br>[A.Hr. Nidhana Sthana 6/29] <sup>205</sup>                                      |

Table 2: Types and dosha specific features of intoxication (mada)

[Cha.Sa.Sutra Sthana 24/30-33]

### Prognosis

Intoxication (mada) caused by poison is most difficult to treat among all types. [A.Hr. Nidhana Sthana 6/29]<sup>206</sup> The transient episodes of other types of intoxication (mada) and syncope (murchha) subside without any medical treatment. However, treatment is required to prevent recurrent episodes and progression in all these disorders.

### *Syncope (murchha)*

The obstruction of channel of consciousness by aggravated dosha lead to sudden aggravation of tamas. This results in cessation of feeling of happiness. The person falls down just like a log of wood. [Su.Sa.Uttara Sthana. 46/6]<sup>207</sup> This is a transient state of unconsciousness. The person awakes after the episode of aggravation of dosha is over.

### Pathogenesis

Weak or emaciated person with excessive vitiation of dosha are susceptible. If these persons indulge in incompatible food, suppression of natural urges, or if afflicted by injuries; then the excessively aggravated dosha affect sensory organs and mind. This

<sup>204</sup> extract sourced from

<http://cosbin2001.blogspot.com/2014/12/health-benefits-of-jaggery-or-gur.html>

<sup>205</sup> Shastri KN, Chaturvedi GN, Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shastri KN, Chaturvedi GN, Editors. Vidyotini Commentary Charak Samhita.1st ed. Varanasi: Chaukhamba Bharti Academy;2004.

<sup>206</sup> Shukla VD, Tripathi RD. Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shukla VD, Tripathi RD Vaidyamanorama Commentary Charak Samhita.1st ed. Delhi; Chaukhamba Sanskrit Pratisthana, 2002.

<sup>207</sup> Chandola HM, Bhatia S. Concept of Diabetes mellitus in Ayurveda and its treatment with certain indigenous drugs. AYU Int 2001;1:84-87.

results in sudden loss of consciousness. [Su.Sa.Uttara Sthana.46/4]<sup>208</sup> The predominant dosha in the pathogenesis of murchha is pitta. [Su.Sa.Uttara Sthana.46/8]<sup>209</sup>

#### Premonitory symptoms

Pain in chest, excessive yawning, exhaustion, loss of strength and consciousness. [Su.Sa.Uttara Sthana.46/5]<sup>210</sup>

#### Types and Features of Syncope (murchha)

| Types       | Features   |
|-------------|--|
| Vata dosha  | Irregular and unpredictable pattern of unconsciousness. While losing consciousness, he may feel bluish, blackish or reddish discoloration of surroundings. [Cha.Sa.Sutra Sthana 24/35-36] Tremors, pain in chest and body ache may also present. |
| Pitta dosha | Regains consciousness associated with sweating, feeling of warmth, thirst, reddish yellow discoloration of eyes and may pass loose stools. [Cha.Sa.Sutra Sthana 24/37-38][A.Hr. Nidhana Sthana 6/32] <sup>211</sup>                              |
| Kapha       |  |

<sup>208</sup> Tripathi SN, Chandola HM. Study on variations in diabetes mellitus (Prameha) with special reference to plasma insulin, cortisol and catecholamines. In Bajaj JS,ed. Diabetes mellitus in Developing Countries. New Delhi, India: Interprint, 1984:125-128.

<sup>209</sup> Sharma H, Chandola HM..Prameha in Ayurveda: Correlation with Obesity, Metabolic Syndrome, and Diabetes Mellitus.Part 1-Etiology, Classification, and Pathogenesis. The Journal of Alternative and Complementary Medicine.2011. 17(6):491-496.

<sup>210</sup> Kajaria Divya, Chandola H.M. Dislipidemia Cause or Consequence of Diabetes- Reanalyzing the pathogenesis with the vision of Ayurveda. Journal of Diabetes and Health, Photon. 2014.

<sup>211</sup> Pandey Rashmi, Dubey N., Tripathi NS. Ayurvedic Concept of Lifestyle Ailments and its Healing Through Traditional Regimen., 2015, Scholars Journal of Applied Medical Sciences, 3(3H):1599-1601

| Types<br>dosha   | Features   |
|--|--|
| Sthana 24/39-40] [A.Hr. Nidhana<br>Sthana 6/35] <sup>212</sup> | Regains consciousness slowly,<br>feels as if body is covered with<br>thick blanket, salivation and<br>nausea. [Cha.Sa.Sutra      |
| Sannipata  | Symptoms resembles epilepsy<br>(apasmara) but devoid of irregular<br>body movements. [Cha.Sa.Sutra                               |
| Sthana 24/41][A.Hr. Nidhana<br>Sthana 6/35] <sup>213</sup>     |  |
| Blood (rakta)  | Stiffness of body parts, fixed gaze<br>and feeble respiration.<br>[Su.Sa.Uttara Sthana 46/11] <sup>214</sup>                     |
| Alcohol (Madya)  | Irrelevant speech, altered state of<br>mind, irregular movements of body<br>parts. [Su.Sa.Uttara Sthana<br>46/12] <sup>215</sup> |
| Visha  | Tremors, sleep, thirst and body<br>stiffness. [Su.Sa.Uttara Sthana<br>46/13] <sup>216</sup>                                      |

Table 3: Types and Features of Syncope (murchha)

#### *Coma (sanyasa)*

The excessively aggravated dosha affect speech, body and mind. They are lodged in heart (hridaya) and result in cessation of all body activities with absolute loss of

<sup>212</sup> Kumar Manish, Kividassanavar MB et al. Screening of Serum Insulin in Obese Individual WSR to Sthaulya: An Observational Study. 2016. European Journal of Pharmaceutical and Medical Research, 2016,3(9),638-640

<sup>213</sup> extracts from [http://www.jbsoweb.com/admin/php/uploads/215\\_pdf.pdf](http://www.jbsoweb.com/admin/php/uploads/215_pdf.pdf)

<sup>214</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>215</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>216</sup> May, RC et al. 1996. Glucocorticoids and acidosis stimulate protein and amino acid catabolism in vivo. Kidney Int. 1996 Mar;49(3):679-83.

consciousness. This condition is coma (sanyasa). [Cha.Sa.Sutra Sthana 24/42] This is a prolonged episode of unconsciousness.

### Diagnostic tests

A variety of blood tests like complete blood count, blood smear, blood type, Coomb's test, blood culture, mixing study, bone marrow biopsy are available to diagnose the quality of blood tissue. Angiography, computed tomography scan, magnetic resonance imaging techniques are useful to diagnose abnormalities in blood vessels and blood circulation. Utilization of these diagnostic tools is helpful in knowing precise nature of pathological events in syncope and coma.

### Prognosis

Immediate medical intervention is needed for coma (sanyasa). [A.Hr. Nidhana Sthana 6/36] Medical treatment is required to prevent recurrent episodes of disease and correct vitiation of blood tissues.

Metabolic acidosis and alkalosis should be considered to gain an understanding of blood disorders (raktaja vikara). Electrolyte imbalances should be evaluated for the keen diagnosis of mada, murchcha, and sanyasa. [59-60]

### Management

The first aim of treatments mentioned are under emergency medical care is regaining consciousness. It includes stimulating and irritant therapies. Sensory stimuli by pricking with needle, applying potent collyrium etc. are used to check the level of consciousness. The drugs used are strong and penetrating in nature.

After regaining the consciousness, the treatment should be continued to prevent the remission. This includes purification procedures like emesis (vamana), purgation (virechana), bloodletting (raktamoksha) etc. After that rejuvenating therapy (rasayana) is also advised. Medicated ghee processed with herbs is used for this purpose. The lipoidal nature of ghee (cow's ghee) makes it an effective vehicle for carrying the active principles of processed drugs and it can easily cross the blood brain barrier.<sup>217</sup>

### Case reports

#### Case 1:

A sixty one year old female patient in state of coma was treated successively through Ayurveda treatment. Initially the GCS score of patient was 3. Nasal medication (nasya) with trikatu powder was administered for seven days followed by seven days of inhalation of medicated smoke (dhumapana). The GCS score was improved to 11 after the treatment. Smell sensation projects to higher cortical area and to the limbic system.

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<sup>217</sup> Vaudevan et al. 2011. Textbook of biochemistry for medical students, Sixth Edition, JP Medical Publishers

Drugs administered in powder form may stimulate the limbic system, hypothalamus and thalamus. This in turn may activate the reticular activating system which provokes higher degree of consciousness.<sup>218</sup>

### **Case 2:**

An elderly male patient diagnosed with grade-3 hepatic encephalopathy in comatose state was treated with Ayurvedic medicines. The medicines like siddha makaradhwaja, brihad vata chintamani rasa, a proprietary syrup of extract of Phyllanthus niruri, and a proprietary syrup of hepatoprotective and cholegouge herbs were administered through Ryle's tube. Reorientation was started in the patient after 5 hours of initiation of the Ayurvedic therapy. The clinical parameters and pathological biomarkers gradually improved in a period of fifteen days. This case provides scope of ayurvedic interventions in critical care.<sup>219</sup>

### **Case 3, 4 and 5:**

A case series on efficacy of functional medicine approach to treat traumatic brain injuries (TBI) was published. It included two cases of teenagers suffered TBI due to motor vehicle accidents in separate events. These patients showed significant improvement and recovered from comatose state after treatment through functional medicine approach. Another case of military veteran was diagnosed with post traumatic stress disorder (PTSD) and post concussion syndrome (PCS) due to blast injury. He completely recovered from PTSD with the help of hyperbaric oxygen therapy (HBOT). The functional medicine approach includes use of acupuncture, Ayurveda, chiropractic manipulation, detoxification programs, herbal and homeopathic supplements, specialized diets, massage, meditation and mindfulness practices, neurobiofeedback, nutritional supplements, t'ai chi, and yoga. Nutritional therapy and HBOT showed improvement in these cases.<sup>220</sup>

### **Case 6:**

A 68 year old male patient with a history of hypertension for 10 years, alcoholic liver disease, cirrhosis and adenocarcinoma stomach was treated with ayurvedic treatments. He was in comatose state after suffering from seizures, cerebrovascular stroke due to intracranial hemorrhage and hemiplegia. The patient was treated with medicines like Sutendra rasayana with honey, Arpisa rasayana, a combination of Phyllanthus emblica (dhatri), raktapachaka and Alhagi maurorum Medik.(dhamasa). Tapyadi loha, swarna

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<sup>218</sup> Parfitt A. 1982 The coupling of bone formation to bone resorption: a critical analysis of the concept and of its relevance to the pathogenesis of osteoporosis. Metab Bone Dis Relat Res 4:1–6.

<sup>219</sup> Mundy G 1989 Local factors in bone remodeling. Rec Prog Horm Res 45:507–531.

<sup>220</sup> Hayward M, Fiedler-Nagy C 1987 Mechanisms of bone loss: rheumatoid arthritis, periodontal disease and osteoporosis. 22:251–254.

raja vangeshwara rasa, haridra ghana, kukkantha nakhi, rasa sindura with honey. The patient regained consciousness in three to four days and was relieved of major symptoms. He survived for more than one and half years.<sup>221</sup>

#### **Case 7:**

A thirty year old male patient suffered from road traffic accident. He was in coma due to traumatic brain injury. The injury included 10x,2x deep lacerated wound on right side forehead, brain contusion at frontal lobe and intraventricular bleeding on right side. In addition to the conventional treatment, the patient was treated with Ayurvedic medicines like Swarna sindoora (30 mg) mixed with haridra ghana and honey applying on gums of patient. The patient became semiconscious in two days and improved in orientation, too. The patient was further treated with Yogendra rasa (60 mg). He regained consciousness and recovered completely.<sup>222</sup>

#### **Case 8:**

A 43 year old male patient suffered from skull and facial bones fractures due to road traffic accident 10 years ago. He suffered from epilepsy and was taking treatment. The patient reported history of excess mental stress, excess fasting, anorexia and anger. He suffered from convulsions and became unconscious due to intracerebral hemorrhage of 7.9 x 5.6 cm size in right temporo-parietal region. The patient was treated with Ayurvedic medicines like Sindura bhushana mixed with Haridra ghana every four hourly applied on gums. Medicated water processed with gold (Suvarna siddha jala) and green gram soup was given to patient through Ryle's tube. Jaymangal rasa and Guduchi ghana was added to treat fever. The fever subsided in one day and subsequently the patient started maintaining oxygen levels. The life support system was taken off. The orientation and consciousness improved significantly in a week of treatment. Arpisa rasayana, Jaymangal rasa, vara, and raktagachaka medicines were continued for next two weeks, till complete recovery of the patient. Significant clinical improvement in neurological functions were observed in this patient.<sup>223</sup>

### **Effect of seasonal variations in blood physiology**

A research work was conducted to study effect of seasonal variations on clinical features of blood vitiation described in this chapter. The research also included observations on hematological parameters. The study concluded that significant increase in clinical features of blood vitiation was observed in autumn season (sharad

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<sup>221</sup> Tuominen J, Impivaara O, Puukka P, Ronnenmaa T 1999 Bone mineral density in patients with type 1 and type 2 diabetes. *Diabetes Care* 22:1196–1200.

<sup>222</sup> Krakauer J, McKenna M, Burderer N, Rao D, Whitehouse F, Parfitt A 1995 Bone loss and bone turnover in diabetes. *Diabetes* 44:775–782.

<sup>223</sup> Macey L, Kana SM, Jingushi S, Terek RM, Borretos J, Bolander ME 1989 Defects of early fracture-healing in experimental diabetes. *J Bone Joint Surg Am* 71:722–733.

ritu) as compared to rainy season (varsha ritu) and early winters (hemant ritu). Mild seasonal variations were observed in hematological parameters like total red blood cells, white blood cell count, erythrocyte sedimentation rate, absolute eosinophil count, serum cholesterol. A large sample study is required to derive a concrete conclusion.

### Contemporary views

Advanced medical technology has enhanced the understanding of microscopic nature of blood tissue, its components and all physical characteristics. The features described in Ayurveda text describe macroscopic changes related to affecting dosha. However, there is much scope of research in bridging the gaps between concepts of these two biomedical sciences.

Some researchers state that the clinical features are similar to the state of disorders due to change in blood pressure leading to hypertension. Some researchers opine that the pathogenesis and features of mada, murchcha and sanyasa show many similarities with shock due to severe hypotension.<sup>224</sup>

### Future research areas

- Role of causative factors described in this chapter in hematological disorders and disorders of cardio vascular system
- Understanding exact pathological and microscopic nature of vitiation of blood and relation with dosha specific changes
- Influence of seasonal changes on blood physiology
- Epigenetic changes in blood tissue and its patho-physiological understanding

### Related chapters

- Raktapitta Nidana
- Raktapitta Chikitsa
- Rakta dhatus
- Raktamokshana

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<sup>224</sup> Gebauer G, Lin S, Beam H, Vieira P, Parsons J 2002 Low-intensity pulsed ultrasound increases the fracture callus strength in diabetic BB Wistar rats but does not affect cellular proliferation. *J Orthop Res* 20:587–592.

## **Yajjah Purushiya Adhyaya**

### **Sutra Sthana Chapter 25. Origin of Human Beings and the best things for life Abstract**

This chapter, the first within the annapana chatushka (tetrad of guidelines on food and beverages), is based on the findings of a congregation of ancient Ayurveda practitioners and sages, assembled to understand the origin of Purusha (conscious/sentient being) and causes of diseases that afflict the purusha. Different theories to understand various aspects that influence the purusha are postulated, such as those of atma (spirit), manas (mind), rasa (nutrient fluid), shad dhatu (six elements), matru-pitru(parents), karma (past deeds), swabhava (nature), Prajapati (creator), and Kala (time). After considering all these postulations, it is concluded that the same factors that are responsible for the origin of humans are responsible for diseases too. The wholesome diet is responsible for proper growth and development of holistic human being, while the unwholesome diet for diseases. The most commonly applicable wholesome (and unwholesome) diet is discussed with examples. A specific collection called agrya samgraha (collection of definitive and first choice of medication or treatment) is introduced. In all, one hundred fifty-six drugs and therapies have been enumerated in this chapter. Also ingredients used in 84 naturally fermented preparations named 'asava' that help in strengthening the patient's mind, body and digestive power (agni) are listed.

**Keywords:** Purusha (conscious beings – humans, souls, etc.), *agrya samgraha* (foremost collection/formulation/medication applicable), *hitakara*, *ahitakara*, wholesome, unwholesome, *asava* (alcoholic preparations).

### **Introduction**

This chapter discusses various theories (regarding the origin of Purusha as well as the diseases that afflict him) postulated by ten sages (or scholars) under the aegis of Lord Punarvasu Atreya – providing insights into the various aspects that influence the shaping of the being, and also the origin of the ailments or disorders that afflict it. Kashipati Vamaka initiated the discussions with a query about the origin of human beings and disease, followed by Maudagalya Parikshi (on atma theory), Sharaloma (on *sattva* theory), Varyovida (on *rasa* theory), Hiranyaksha (on *shad-dhatu* theory), Kaushika (on *mata-pitru* theory), Bhadrakanya (on *karma* theory), Bharadwaja (on *swabhava* theory), Kankayana (on Prajapati theory), and Atreya Bhikshu (on *kala* theory). Lord Punarvasu Atreya concluded the discussions by stating that the same factors that are responsible for the origin and growth of human beings can cause diseases also. This chapter is closely associated with the third chapter of Sharira Sthana (*Khuddika garbhavakranti*), which provides additional insights into the origins of human beings.

Considering the health of human beings, dietary articles that are beneficial and harmful have been provided in this chapter with relevant examples. The first choices in

medication, the best factors in various categories, and suggested lifestyle have been grouped into a category named *agrya samgraha*. Also, Lord Atreya answers Agnivesha's query about *asava* (alcoholic preparations) with an elaborate explanation of eighty-four types of *asava*, categorized by parts of herbs used in their preparation. Thus, this chapter provided an introduction to food and beverages that are beneficial to health.

## Sanskrit text, Transliteration and English Translation

अथातो यज्जः पुरुषीयमध्यायं व्याख्यास्यामः ||१||

इति ह स्माह भगवानात्रेयः ||२||

athātō yajjaḥpuruṣīyamadhyāyāṁ vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAto yajjaHpuruShlyamadhyAyaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Yajjah Purushiya” (Origin of Human Beings and the best things for life). Thus said Lord Atreya [1-2]

### Symposium on origin of purusha

#### *The objective of Symposium*

पुरा प्रत्यक्षधर्माणं भगवन्तं पुनर्वसुम्।

समेतानां महर्षीणां प्रादुरासीदियं कथा ॥३॥

आत्मेन्द्रियमनोर्थानां योऽयं पुरुषसञ्जकः।

राशिरस्यामयानां च प्रागुत्पत्तिविनिश्चये॥४॥

purā pratyakṣadharmaṇāṁ bhagavantāṁ punarvasum|

samētānāṁ [1] maharṣīṇāṁ prādūrāśīdiyāṁ kathā [2] ||3||

ātmēndriyamanōrthānāṁ yō'yām puruṣasañjñakah|

rāśirasyāmayānāṁ ca prāgutpattiviniścayē||4||

purA pratyakShadharmaNaM bhagavantaM punarvasum|

sametAnAM maharShINAM prAdurAsldiyaM kathA ||3||

AtmendriyamanorthAnAM yo~ayaM puruShasa;jakaH|

rAshirasyAmayAnAM ca prAgutpattivinishcaye||4||

Long ago, the great sages (thinkers) assembled before Lord Punarvasu (Atreya), who had directly perceived and realized all knowledge. A discussion arose about the determination of the truth of the primal origin of Purusha (an aggregate of soul, senses, psyche and sense objects) and the origin of the diseases. [3-4]

*Query by Kashipati Vamaka*

तदन्तरं काशिपतिर्वामको वाक्यमर्थवित् [१] | व्याजहारर्षिसमितिमुपसृत्याभिवाद्य च||५||

किन्नु भोः पुरुषो यज्जस्तज्जास्तस्यामयाः स्मृताः| न वेत्युक्ते नरेन्द्रेण प्रोवाचर्षीन् पुनर्वसुः||६||

सर्वे एवामितज्ञानविज्ञानचिन्नसंशयाः| भवन्तश्छेतुमर्हन्ति काशिराजस्य संशयम्||७||

tadantaram kāśipatirvāmakō vākyamarthavit [1] | vyājahārarsisamitimupasṛtyābhivādy  
ca||5||

kinnu bhōḥ puruṣo yajjastajjāstasyāmayāḥ smṛtāḥ| na vētyuktē narēndrēṇa prōvācarṣīn  
punarvasuh||6||

sarva ēvāmitajñānavijñānacchinnaśāśayāḥ| bhavantaśchēttumarhanti kāśirājasya  
śāśayam||7||

tadantaraM kAshipatirvAmako vAkyamarthavit |  
vyAjahArarShisamitimupasRutyAbhivAdya ca||5||

kinnu bhoH puruSho yajjastajjAstasyAmayAH smRutAH| na vetyukte narendreNa  
provAcarShIn punarvasuH||6||

sarva evAmitaj<sub>Anavij</sub>jAnacchinānasaMshayAH| bhavantashchettumarhanti kAshirAjasya  
saMshayam||7||

After that, Vamaka, the king of Kashi, who was learned in the science of the subject (medicine), approached the assembly of the sages (learned persons/exponents in various subject matters) and put the following questions. “Oh sirs! What is the truth? Do diseases originate from the same source, which is also the origin of humans? Is it truth or otherwise?”

In this reference, Lord Punarvasu addressing the sages said as follows- “You all sages are enlightened and have broad knowledge. Your doubts have been cleared by your unlimited knowledge of science. You are capable of resolving the doubts raised by the king of Kashi.” [5-7]

*The opinion of Maudgalya Parikshi on Atmaja Purusha (spirit theory)*

पारीक्षिस्तत्परीक्ष्याग्रे मौद्गल्यो वाक्यमब्रवीत्।

आत्मजः पुरुषो रोगाश्चात्मजाः कारणं हि सः॥८॥

स चिनोत्युपभुङ्कते च कर्म कर्मफलानि च।

नह्यृते चेतनाधातोः प्रवृत्तिः सुखदुःखयोः॥९॥

pārīkṣīstatparīksyāgrē maudgalyō vākyamabравīt|  
 ātmajah puruṣō rōgāścātmajah kāraṇam hi sah||8||  
 sa cinōtyupabhuñktē ca karma karmaphalāni ca|  
 nahyṛtē cētanādhātōh pravṛttiḥ sukhaduhkhayōh||9||  
 pArlkShistatparlkShyAgre maudgalyo vAkyamabrvlt|  
 AtmajaH puruSho rogAshcAtmajAH kAraNaM hi saH||8||  
 sa cinotyupabhu~gkte ca karma karmaphalAni ca|  
 nahyRute cetanAdhAtoH pravRuttiH sukhaduHkhayoH||9||

Considering the query of Kashipati Vamaka, Maudgalya Parikshit formulated his answer first. He said “Human being is born of Atma (spirit) and like that all the diseases are born of atma. The spirit is the source of all things. The atma acquires the actions and enjoys the merits of action as the fruit of actions. In the absence of this atma, there is no activity either pleasurable or painful. [8-9]

*The opinion of Sharaloma as Sattvaja Purusha (mind theory)*

शरलोमा तु नेत्याह न ह्यात्माऽस्त्मानमात्मना।  
 योजयेदव्याधिभिर्दुःखैर्दुःखद्वेषी कदाचन॥१०॥  
 रजस्तमोऽन्यां तु मनः परीतं सत्त्वसञ्जकम्।  
 शरीरस्य समुत्पत्तौ विकाराणां च कारणम्॥११॥  
 śaralōmā tu nētyāha na hyātmā”tmānamātmanā|  
 yōjayēdvyādhhibhirduhkhairduhkhadvēṣī kadācanai॥10॥  
 rajastamōbhyaṁ tu manah parītaṁ sattvasañjñakam|  
 śarīrasya samutpattau vikārāṇāṁ ca kāraṇam॥11॥  
 sharalomA tu netyAha na hyAtmA\_atmAnamAtmanA|  
 yojayedvyAdhibhirduHkhairduHkhadveShI kadAcana॥10॥  
 rajastamobhyAM tu manah paritaM sattvasa,jakam|  
 sharlrasya samutpattau vikArANAM ca kAraNam॥11॥

Intervening the opinion of Maudgalya, Sharaloma said, “No. This is not correct, because atma dislikes pain naturally and, therefore, would never repress itself with disease and other types of pain. The manas(mind), influenced by *rajas* and *tamas*, which is also called *sattva*, is the real cause of the origin of the body and its afflictions, both.”[10-11]

*The opinion of Varyovida as Rasaja Purusha (fluid theory)*

वार्योविदस्तु नेत्याह न हयेकं कारणं मनः ।  
नर्ते शरीराच्छारीररोगा न मनसः स्थितिः॥१२॥  
रसजानि तु भूतानि व्याधयश्च पृथग्विधाः।  
आपो हि रसवत्यस्ता: स्मृता निर्वृतिहेतवः॥१३॥

vāryōvidastu nētyāha na hyēkarām kāraṇam manah |  
nartē śarīrācchārīrarōgā na manasaḥ sthitih||12||  
rasajāni tu bhūtāni vyādhayaśca pṛthagvidhāḥ|  
āpō hi rasavatyastāḥ smṛtā nirvṛttihētavah||13||

vAryovidastu netyAha na hyekAM kAraNaM manaH |  
narte sharIrAcchArIrarogA na manasaH sthitiH||12||  
rasajAni tu bhUtAni vyAdhayashca pRuthagvidhAH|  
Apo hi rasavatyastAH smRutA nirvRuttihetavaH||13||

Varyovida objected to the views of Sharaloma. He said, “No! *Manas* (mind) alone is not the cause of the origin of both (human and disease) because, without the body, there can neither be any somatic disease nor mind will get existence. All creatures (animates) originate from *rasa* (fluid), and so are the various types of diseases. *Rasas* originate from water and, therefore, water is ascribed as the source of their manifestations.” [12-13]

*The opinion of Hiranyaksha as Shad-dhatuja Purusha (six element theory)*

हिरण्याक्षस्तु नेत्याह न हयात्मा रसजः स्मृतः।  
नातीन्द्रियं मनः सन्ति रोगाः शब्दादिजास्तथा॥१४॥  
षड्धातुजस्तु पुरुषो रोगाः षड्धातुजास्तथा।  
राशिः षड्धातुजो हयेष साङ्ख्यैराद् यैः प्रकीर्तिः ||१५||

hiran̄yākṣastu nētyāha na hyātmā rasajah smṛtah|  
nātīndriyam manah santi rōgāḥ śabdādijāstathā||14||  
ṣaḍdhātujastu puruṣo rōgāḥ ṣaḍdhātujāstathā|  
rāśih ṣaḍdhātujō hyēṣa sāṅkhyairādyaiḥ prakīrtitah ||15||

hiraNyAkShastu netyAha na hyAtmA rasajaH smRutaH|

nAtIndriyaM manaH santi rogAH shabdAdijAstathA||14||  
 ShaDdhAtujastu puruSho rogAH ShaDdhAtujAstathA|  
 rAshiH ShaDdhAtujo hyeSha sA~gkhyairAdyaiH praklrtitaH ||15||

After hearing the views of Varyovida, Hiranyaksha said, “No! It is not right. Human beings are born neither from the *atman*, nor *rasa* (fluids) nor even the super-sensual mind because there are some diseases caused due to sense objects (such as sound) as well.

Human is the result of *shad-dhatu* (six elements, including *panchamahabuta* or the five elements, and *atman*). Diseases also arise from those six elements. This is the principle of *Samkhya* philosophy. This type of constitution is also referred to as *Rashi Purusha*. [14-15]

#### *The opinion of Kaushika as Matrija-pitrija Purusha(parent theory)*

तथा ब्रुवाणं कुशिकमाह तन्नेति कौशिकः।  
 कस्मान्मातापितृभ्यां हि विना षड्धातुजो भवेत्॥१६॥  
 पुरुषः पुरुषादगौर्गोरश्वादश्वः प्रजायते।  
 पित्र्या मेहादयश्चोक्ता रोगास्तावत्र कारणम्॥१७॥  
 tathā bruvāṇam kuśikamāha tannēti kauśikah|  
 kasmānmātāpitṛbhyaṁ hi vinā ṣaddhātujō bhavēt||16||  
 puruṣah̄ puruṣādgaurgośvādaśvah̄ prajāyatē|  
 pitryā mēhādayaścōktā rōgāstāvatra kāraṇam||17||  
 tathA bruvANaM kushikamAha tanneti kaushikaH|  
 kasmAnmAtApitRubhyAM hi vinA ShaDdhAtujo bhavet||16||  
 puruShaH puruShAdgaurgorashvAdashvaH prajAyate|  
 pitryA mehAdayashcoktA rogAstAvatra kAraNaM||17||

To Kushika (Hiranyaksha) who was presenting his views, sage Kaushika said, “No, This is not true. How can the six elements create an individual without any role of the father and the mother? A human is born of a human (parents), the cow is born of cows, and the horse is born of horses. Diseases such as *prameha* (obstinate urinary diseases), and various other diseases, are considered to be hereditary. Therefore, the father and the mother (parents) are the origin of the humans and also the diseases. [16-17]

#### *The opinion of Bhadrakanya as Karmaja Purusha (deeds in past life theory)*

अद्रकाप्यस्तु नेत्याह नहयन्धोऽन्धात् प्रजायते।

मातापित्रोरपि च ते प्रागुत्पत्तिर्न युज्यते॥१८॥  
 कर्मजस्तु मतो जन्तुः कर्मजास्तस्य चामयाः।  
 नहयृते कर्मणो जन्म रोगाणां पुरुषस्य वा॥१९॥  
 bhadrakāpyastu nētyāha nahyandhō'ndhāt prajāyatē|  
 mātāpitrōrapi ca tē prāgutpattirna yujyatē||18||  
 karmajastu matō jantuḥ karmajāstasya cāmayāḥ|  
 nahyṛtē karmaṇō janma rōgāṇāṁ puruṣasya vā||19||  
 bhadrakApyastu netyAha nahyandho~andhAt prajAyate|  
 mAtpitrorapi ca te prAgutpattirna yujyate||18||  
 karmajastu mato jantuH karmajAstasya cAmayAH|  
 nahyRute karmaNo janma rogANAM puruShasya vA||19||

Bhadrakapya disagreed with the above views and said, “No. This is not true because blind children are not born to blind parents. Parents themselves also are not born before the creation. Therefore, human beings, as well as the diseases, originate from the deeds performed in past life. Without *karma* (past action or deeds) neither human beings nor their diseases could have been created. [18-19]

*The opinion of Bharadvaja as Svabhavaja Purusha (nature theory)*

भरद्वाजस्तु नेत्याह कर्ता पूर्वं हि कर्मणः।  
 दृष्टं न चाकृतं कर्म यस्य स्यात् पुरुषः फलम्॥२०॥  
 भावहेतुः स्वभावस्तु व्याधीनां पुरुषस्य च।  
 खरद्रवचलोष्णत्वं तेजोन्तानां यथैव हि॥२१॥  
 bharadvājastu nētyāha kartā pūrvam hi karmaṇah|  
 dr̄ṣṭam na cākṛtam karma yasya syāt puruṣah phalam||20||  
 bhāvahētuḥ svabhāvastu vyādhīnāṁ puruṣasya ca|  
 kharadravacalōṣṇatvam tējontānāṁ yathaiva hi||21||  
 bharadvAjastu netyAha kartA pUrvam hi karmaNaH|  
 dRuShTaM na cAkRutaM karma yasya syAt puruShaH phalam||20||  
 bhAvahetuH svabhAvastu vyAdhInAM puruShasya ca|  
 kharadravacaloShNatvaM tejontAnAM yathaiva hi||21||

Listening to this theory, sage Bharadwaja said, “No, this is not true. For the doer always precedes the deeds. There is no deed performed without the presence of the doer. Nor any human being is born as a result only of deeds. The intrinsic nature alone (*svabhava*) is the cause of the existence of living beings and their diseases just as roughness (*khara*), fluidity (*drava*), mobility (*chalatva*) and heat (*ushnatva*) are respectively the intrinsic nature (or *svabhava*) of *prithvi*, *apa*, *vayu* and *tejas*. “[ 20-21]

#### *The opinion of Kankayana as Prajapatija Purusha (creator theory)*

काङ्कायनस्तु नेत्याह न ह्यारम्भफलं भवेत्।  
भवेत् स्वभावाद्भावानामसिद्धिः सिद्धिरेव वा॥२२॥  
स्रष्टा त्वमितसङ्कल्पो ब्रह्मापत्यं प्रजापतिः।  
चेतनाचेतनस्यास्य जगतः सुखदुःखयोः॥२३॥  
kāṅkāyanastu nētyāha na hyārambhaphalaṁ bhavēt|  
bhavēt svabhāvādbhāvānāmasiddhiḥ siddhirēva vā||22||  
sraṣṭā tvamitasaṅkalpō brahmāpatyāṁ prajāpatiḥ|  
cētanācētanasyāsyā [1] jagataḥ sukhaduhkhayōḥ||23||  
kA~gkAyanastu netyAha na hyArambhaphalaM bhavet|  
bhavet svabhAvAdbhAvAnAmasiddhiH siddhireva vA||22||  
sraShTA tvamitasa~gkalpo brahmApatyaM prajApatiH|  
cetanAcetanasyAsya [1] jagataH sukhaduHkhayoH||23||

Refuting the arguments of Bharadwaja, sage Kankayana said, “No, such an effort would be fruitless. Things would either get accomplished or not get accomplished by the course of nature. The son of Brahma, Prajapati, who possesses infinite creative powers, is the origin of living beings as well as non-living things, happiness as well as misery”.[22-23]

#### *The opinion of Bhikshu Atreya as Kalaja Purusha (time theory)*

तन्नेति भिक्षुरात्रेयो न ह्यपत्यं प्रजापतिः।  
प्रजाहितैषी सततं दुःखेर्युञ्ज्यादसाधुवत्॥२४॥  
कालजस्त्वेव पुरुषः कालजास्तस्य चामयाः।  
जगत् कालवशं सर्वं कालः सर्वत्र कारणम्॥२५॥  
tannēti bhikṣurātrēyō na hyapatyāṁ prajāpatiḥ|  
prajāhitaiśī satatāṁ duḥkhairyuñjyādasādhuvat||24||

kālajastvēva puruṣah kālajāstasya cāmayāḥ|  
 jagat kālavaśam sarvam kālah sarvatra kāraṇam||25||  
 tanneti bhikShurAtreyo na hyapatyaM prajApatiH|  
 prajAhitaShI satataM duHkhairyu~jjyAdasAdhuvat||24||  
 kAlajastveva puruShaH kAlajAstasya cAmayAH|  
 jagat kAlavashaM sarvaM kAlaH sarvatra kAraNam||25||

Bhikshu Atreya said, “No. This is not true. Prajapati (the Lord of Creation) always seeks the well-being of all of the creation. So he would never bring misery to his creations, like some cruel friend?? . Human beings and their diseases are caused by time (*kala*) because the whole universe is under control of *kala*. *Kala* is the origin of all. [22-25]

*Explanation and Decision by Punarvasu Atreya*

तर्थर्षीणां विवदतामुवाचेदं पुनर्वसुः।  
 मैवं वोचत तत्त्वं हि दुष्प्रापं पक्षसंश्रयात्॥२६॥  
 वादान् सप्रतिवादान् हि वदन्तो निश्चितानिव।  
 पक्षान्तं नैव गच्छन्ति तिलपीडकवद्गतौ॥२७॥  
 मुक्त्वैवं वादसङ्घट्टमध्यात्ममनुचिन्त्यताम्।  
 नाविधूते तमःस्कन्धे ज्ञेये ज्ञानं प्रवर्तते॥२८॥  
 येषामेव हि भावानां सम्पत् सञ्जनयेन्नरम्।  
 तेषामेव विपद्व्याधीन्विधान्समुदीरयेत्॥२९॥  
 tatharṣīnāṁ vivadatāmuvacēdaṁ [1] punarvasuh|  
 maivam vōcata tattvam hi duṣprāpaṁ pakṣasamśrayāt||26||  
 vādān saprativādān hi vadantō niścitānival  
 pakṣāntam naiva gacchanti tilapīḍakavadgatau||27||  
 muktvaivam vādasaṅghaṭṭamadhyātmamanucintyatām|  
 nāvidhūtē tamahskandhē jñeyē jñānam pravartatē||28||  
 yēśāmēva hi bhāvānāṁ sampat sañjanayēnnaram|  
 tēśāmēva vipadvyādhīnvividhānsamudīrayēt||29||  
 tatharShINAM vivadatAmuvAcedaM [1] punarvasuH|  
 maivaM vocata tattvaM hi duShprApaM pakShasaMshrayAt||26||

vAdAn saprativAdAn hi vadanto nishcitAniva|  
 pakShAntaM naiva gacchanti tilapIDakavadgatau||27||  
 muktvaivaM vAdasa~gghaTTamadhyAtmamanucintyatAml  
 nAvidhUte tamaHskandhe j~jeye j~jAnaM pravartate||28||  
 yeShAmeva hi bhAvAnAM sampat sa~jjanayennaram|  
 teShAmeva vipadvyAdhInvividhAnsamudlrayet||29||

Observing the course of such a controversial and sensitive discussion involving such eminent sages, Lord Punarvasu stated, “Please do not dispute over this matter, O Sages! It is difficult to arrive at the whole truth in this debate considering only partial aspects. Those who argue and counter argue over points go on circumventing without reaching any conclusion, like a person who operates an oil press. Therefore, let us avoid this war of words and put our collective minds to arrive at the truth. One cannot attain any true knowledge without clearing the obscuring cloud or the darkness of ignorance. The fact is that the same elements, whose wholesome combination gives rise to the well-being of human beings, bring about various kinds of diseases when combined in an unwholesome manner. [26-29]

### Origin of disease

*Second query by Kashipati Vamaka*

अथात्रेयस्य भगवतो वचनमनुनिशम्य पुनरेव वामकः काशिपतिरुवाच भगवन्तमात्रेयं-  
 भगवन्! सम्पन्निमित्तजस्य पुरुषस्यविपन्निमित्तजानां च रोगाणां किमभिवृद्धिकारणमिति||३०||  
 athātrēyasya bhagavatō vacanamanuniśamya punarēva vāmakah kāśipatiruvāca  
 bhagavantamātrēyam-

Bhagavan! sampannimittajasya puruṣasya vipannimittajānāṁ ca rōgānāṁ  
 kimabhivṛddhikāraṇamiti||30||

athAtreyasya bhagavato vacanamanunishamya punareva vAmakaH  
 kAshipatiruvAcabhadragavantamAtreyaM-

Bhagavan! sampannimittajasya puruShasya vipannimittajAnAM ca  
 rogANAMkimabhivRuddhikAraNamiti||30||

On hearing this statement by Lord Atreya, Kashipati Vamaka again asked, “Sir, what is the cause of the growth of human beings who are born with wholesome combination and diseases which are born of unwholesome combinations? [30]

*Reply by Atreya- Cause of growth of human being and diseases*

तमुवाच भगवानात्रेयः-

हिताहारोपयोग एक एव पुरुषवृद्धिकरो भवति, अहिताहारोपयोगः पुनर्व्याधिनिमित्तमिति [१] ||३१||

tamuva<sup>ca</sup> bhagavānātrēyaḥ-

hitāhārōpayoga ēka ēva puruṣavṛddhikarō bhavati,  
ahitāhārōpayogaḥ punarvyādhinimittamiti [1] ||31||

tamuva<sup>ca</sup> bhagavAnAtreyaH-

hitAhAropayoga eka eva puruShavRuddhikaro bhavati,  
ahitAhAropayogaHpunarvyAdhinimittamiti [1] ||31||

Lord Atreya replied to him, “Ingesting wholesome food is the only cause of the nourishment of Purusha, and unwholesome diet is the cause of diseases.” [31]

### Wholesome and unwholesome things for holistic human being

*Query by Agnivesha*

एवंवादिनं भगवन्तमात्रेयमग्निवेश उवाच- कथमिह भगवन्!

हिताहितानामाहारजातानां

लक्षणमनपवादमभिजानीमहे; हितसमाख्यातानामाहारजातानामहितसमाख्यातानां च  
मात्राकालक्रियाभूमिदेहदोषपुरुषावस्थान्तरेषु विपरीतकारित्वमुपलभामह इति॥३२॥

ēvarṁvādinam bhagvantamātrēyamagnivēśa uvāca- kathamiha Bhagavan!

hitāhitānāmāhārajātānāmlakṣaṇamanapavādamabhijānīmahē;  
hitasaṁkhyātānāmāhārajātānāmahitasaṁkhyātānāṁ  
camātrākālakriyābhūmidēhadōṣapuruṣāvasthāntarēṣu viparītakārītvamupalabhbāmaha  
iti॥32॥

evaMvAdinaM bhagvantamAtreyamagnivesha uvAca- kathamiha Bhagavan!

hitAhitAnAmAhArajAtAnAMlakShaNamanapavAdamabhijAnImahe;  
hitasaMkhyAtAnAmAhArajAtAnAmahitasamAkhyAtAnAM  
camAtrAkAlakriyAbhUmidehadoShapuruShAvasthAntareShu  
viparItakAritvamupalabhbAmaha iti॥32॥

After listening to Lord Atreya, Agnivesha asked, “Sir, How shall we distinguish correctly between wholesome and unwholesome diets? Because, in practice, we find that the articles of diet that are described to be wholesome and unwholesome produce opposite results by variation of dose (quantity), time (meal time, season), a method of preparation, location, constitution of the body, the predominant dosha and the age of an individual. [32].

*Explanation by Atreya*

तमवाच भगवानात्रेयः- यदाहारजातमग्निवेश! समांश्चैव शरीरधातून् प्रकृतौ स्थापयति विषमांश्च  
समौकरोतीत्येतद्धितंविद्धि, विपरीतं त्वहितमिति; इत्येतद्धिताहितलक्षणमनपवादं भवति॥३३॥

tamuvāca bhagavānātrēyah- yadāhārajātamagnivēśa! samāṁścaiva śarīradhātūn  
prakṛtau sthāpayatīviśamāṁśca samīkarōtītyētaddhitam viddhi, viparītaṁ tvahitamiti;  
ityētaddhitāhitalakṣaṇamanapavādambhavati||33||

tamuvAca bhagavAnAtreyaH- yadAhArajAtamagnivesha! samAMshcaiva  
sharIradhAtUn prakRutausthApayati viShamAMshca samIkarotItyetaddhitam viddhi,  
viparitaM tvahitamiti;ityetaddhitAhitalakShaNamanapavAdaM bhavati||33||

Lord Punarvasu Atreya replied, “Oh Agnivesha! Those food articles that maintain an equilibrium state in body elements (dhatus) and help in eliminating abnormalities or disturbances in the path to equilibrium can be considered as wholesome food articles, while those that act in the opposite manner are considered unwholesome. This would be the most accurate description of wholesome and unwholesome food articles. [33]

#### *Query of Agnivesha*

एवंवादिनं च भगवन्तमात्रेयमग्निवेश उवाच-

भगवन्! न त्वेतदेवमुपदिष्टं भूयिष्ठकल्पाः सर्वभिषजो विजास्यन्ति॥३४॥

ēvarṁvādinam ca bhagavantamātrēyamagnivēśa uvāca-

Bhagavan! na tvētadēvamupadiṣṭāṁbhūyiṣṭhakalpāḥ sarvabhiṣajō vijñāsyanti॥34॥

evaMvAdinaM ca bhagavantamAtreyamagnivesha uvAca-

Bhagavan! na tvetadevamupadiShTaMbhuysiShThakalpAH sarvabhiShajo  
vij~jAsyanti॥34॥

After Lord Atreya had stated this, Agnivesha said, “Sir, the definition which is thus propounded will not be comprehended by all kinds of physicians.” [34]

#### *Explanation by Lord Atreya*

तमुवाच भगवानात्रेयः-

येषां हि विदितमाहारतत्त्वमग्निवेश! गुणतो द्रव्यतः कर्मतः सर्वावयवशःच मात्रादयो भावाः, तएतदेवमुपदिष्टं विजातुमुत्सहन्ते।

यथा तु खल्वेतदुपदिष्टं भूयिष्ठकल्पाः सर्वभिषजो विजास्यन्ति, तथैतदुपदेक्ष्यामो मात्रादीन् भावाननुदाहरन्तः; तेषां हिंबहुविधिविकल्पा भवन्ति।

आहारविधिविशेषांस्तु खलु लक्षणतश्चावयवतश्चानुव्याख्यास्यामः॥३५॥

tamuvāca bhagavānātrēyah-

yēśāṁ hi viditamāhāratattvamagnivēśa! guṇatō dravyataḥ karmataḥsarvāvayaśaśca  
mātrādayo bhāvāḥ, ta ētadēvamupadiṣṭam vijñātumutsahantē|

yathā tu khalvētadupadiṣṭam bhūyiṣṭhakalpāḥ sarvabhiṣajō vijñāsyanti,  
tathaitadupadēkṣyāmō mātrādīn bhāvānanudāharantah; tēṣāṁ hi bahuvidhavikalpā  
bhavanti|

āhāravidhiviśēṣāṁstu khalu lakṣaṇataścāvayavataścānuvyākhyāsyāmaḥ||35||

tamuvaCa bhagavAnAtreyaH-

yeShAM hi viditamAhAratattvamagnivesha! guNato dravyataH  
karmataHsarvAvayavashashca mAtrAdayo bhAvAH, ta etadevamupadiShTaM  
vij~jAtumutsahante|

yathA tu khalvetadupadiShTaM bhUyiShThakalpAH sarvabhiShajo vij~jAsyanti,  
tathaitadupadekShyAmomAtrAdIn bhAvAnanudAharantaH; teShAM hi  
bahuvidhavikalpA bhavanti|

AhAravidhivisheShAMstu khalu lakShaNatashcAvayavatashcAnuvyAkhyAsyAmaH||35||

Lord Atreya explained to him (to Agnivesha), “Oh Agnivesha! Those physicians only, who have the knowledge of the science of dietetics (or the knowledge of *dravya*) including the knowledge of properties, actions, contents of food articles, dosage, etc. would prefer to learn from instructions imparted in this (comprehensive) manner. We shall now explain the various specifications of food articles for the understanding of such physicians. It is not possible to explain the dosages of the food articles as their variations (preparations in various forms etc.) are too many according to specification. Variations in the specific rules related to diet and dietary articles utilized in them will be explained with relevant examples in detail and brief (as per the need).[35]

## The classification of food

तद्यथा-

आहारत्वमाहारस्यैकविधमर्थभेदात्; स पुनर्द्वियोनि:, स्थावरजडगमात्मकत्वात्;  
द्विविधप्रभावः, हिताहितोदर्कविशेषात्; चतुर्विधोपयोगः, पानाशनभक्ष्यलेहयोपयोगात्; षडास्वादः,  
रसभेदतः षडविधत्वात्; विंशतिगुणः, गुरुलघुशीतोष्णस्निग्धरुक्षमन्दतीक्ष्णस्थिरसरमृदुकठिन-  
विशदपिच्छिलश्लक्षणखरसूक्ष्मस्थूलसान्द्रवानुगमात्; अपरिसङ्ख्येयविकल्पः,  
द्रव्यसंयोगकरणबाहुल्यात्॥36॥

tadyathā-

āhāratvamāhārasyaikavidhamarthābhēdāt; sa punardvīyōniḥ,  
sthāvarajaṅgamātmakatvāt; dvividhaprabhāvah, hitāhitōdarkaviśēṣāt;  
caturvidhōpayogaḥ, pānāśanabhakṣyalēhyōpayogaḥ; ṣaḍāsvādaḥ, rasabhbēdataḥ  
ṣaḍvidhatvāt;  
virṁśatigunaḥ, gurulaghuśītōṣṇasnidharūkṣamandatīkṣṇasthirasaramṛdukaṭhina-viśada  
picchilaślakṣṇakharasūkṣmāstūlasāndradravānugamāt;  
aparisaṅkhyēyavikalpaḥ, dravyasamānyōgakaraṇabāhulyāt||36||

tadyathA-

AhAratvamAhArasyaikavidhamarthAbhedAt; sa punardviyonIH,  
 sthAvaraja~ggamAtmakatvAt;dvividhaprabhAvaH, hitAhitodarkavisheShAt;  
 caturvidhopayogaH, pAnAshanabhakShyalehyopayogAt;ShaDAsvAdaH, rasabhedataH  
 ShaDvidhatvAt;  
 viMshatiguNaH,gurulaghushItoShNasnigdharUkShamandatIkShNasthirasaramRudukaT  
 hina-vishadapicchilashlakShNakharasUkShmastiUlasAndradravAnugamAt;  
 aparisa~gkhyeyavikalpaH,dravyasaMyogakaraNabAhulyAt||36||

The dietetic classification of food is as follows:

Food is all of one kind in the view of eatability as a common feature. According to the source, food articles are of two types – those based on vegetable sources and those that are based on animal products. It is also of two types based on specific action: actions that have a positive effect and actions that have an unhealthy, unwholesome, or negative effect. Food can also be classified into four groups by the way it is ingested: drinkables, eatables, chewables, and linctuses. Another method of classification categorizes food by taste – and these are six categories. Similarly, from the point of view of their texture or properties, food articles are twenty types : heavy, light, cold, hot, unctuous, dry, slow (dull), sharp, stable, fluidity, soft, hard, clear, viscid, refined, smooth, rough, subtle, gross, dense (or solid) and liquid.

Thus, classifications of food can be countless due to the sheer diversity of ingredients, combinations and their preparations. [36]

## Two main classes of diet

तस्य खलु ये ये विकारावयवा भूयिष्ठमुपयुज्यन्ते, भूयिष्ठकल्पानां च मनुष्याणां प्रकृत्यैव  
हिततमाश्चाहिततमाश्च, तांस्तान्यथावदुपदेक्ष्यामः॥३७॥

tasya khalu yē yē vikārāvayavā bhūyiṣṭhamupayujyantē, bhūyiṣṭhakalpānāṁ ca  
manuṣyāṇāṁ prakṛtyaivahitataṁścāhitataṁśca, tāṁstāṁ  
yathāvadupadekṣyāmaḥ॥३७॥

tasya khalu ye ye vikArAvayavA bhUyiShThamupayujyante, bhUyiShThakalpAnAM ca  
manuShyANAMprakRutyava hitatamAshaCahitatamAsha, tAMstAn  
yathAvadupadekShyAmaH॥३७॥

Nevertheless, we shall now delve upon certain classes of food articles that are mostly commonly used and are naturally the most wholesome and unwholesome to the majority of human beings. [37]

## Wholesome(beneficial) food articles

तद्यथा- लोहितशालयः शूकर्धान्यानां पथ्यतमत्वे श्रेष्ठतमा भवन्ति, मुद्गा: शमीधान्यानाम्,  
आन्तरिक्षमुदकानां, सैन्धवलवणानां, जीवन्तीशाकं शाकानाम्, ऐण्यं मृगमांसानां, लावः पक्षिणां, गोधा  
बिलेशयानां, रोहितो मत्स्यानां, गव्यं सर्पिःसर्पिषां, गोक्षीरं क्षीराणां, तिलतैलं स्थावरजातानां स्नेहानां,  
वराहवसा आनूपमृगवसानां, चुलुकीवसा मत्स्यवसानां, पाकहंसवसा जलचरविहङ्गवसानां, कुकुटवसा

विष्क्रिरशकनिवसानां, अजमेदः शाखादमेदसां, शृङ्गवेरं कन्दानां, मृद्वीकाफलानां, शर्करेक्षुविकाराणाम्, इति प्रकृत्यैव हिततमानामाहारविकाराणां प्राधान्यतो द्रव्याणि व्याख्यातानि भवन्ति॥३८॥

tadyathā- lōhitaśālayah śukadhānyānāṁ pathyatamatvē śrēṣṭhatamā bhavanti, mudgāḥ śamīdhānyānāṁ, āntarikṣamudakānāṁ, saindhavaṁ lavaṇānāṁ, jīvantīśākāṁ śākānāṁ, aiṇeyāṁ mṛgamāṁsānāṁ, lāvahpakṣināṁ, gōdhā bilēśayānāṁ, rōhitō matsyānāṁ, gavyāṁ sarpiḥ sarpiṣāṁ, gōkṣīraṁ kṣīrānāṁ, tilatailaṁsthāvarajātānāṁ snehānāṁ, varāhavasā ānūpamṛgavasānāṁ, culukīvasā matsyavasānāṁ, pākahamsavasā jalacaravihaṅgavasānāṁ, kukkuṭavasā viśkiraśakunivasānāṁ, ajamēdaḥśākhādamēdasāṁ, śṛṅgavēram kandānāṁ, mṛdvīkā phalānāṁ, śarkarēkṣuvikārānāṁ, iti prakṛtyaivahitataṁnāmāhāravikārānāṁ prādhānyatō dravyāṇi vyākhyātāni bhavanti॥३८॥

tadyathA- lohitashAlayaH shUkadAnyAnAM pathyatamate shreShThatamA bhavanti, mudgAHshamIdhAnyAnAm, AntarikShamudakAnAM, saindhavaM lavaNAnAM, jIvantlshAkAM shAkAnAm, aiNeyaMmRugamAMsAnAM, IAvaH pakShiNAM, godhA bileshayAnAM, rohito matsyAnAM, gavyaM sarpiHsarpisHAM, gokShIraM kShIrlANAM, tilatailaM sthAvarajAtAnAM snehAnAM, varAhavasAAAnUpamRugavasAnAM, culukIvasA matsyavasAnAM, pAkahaMsavasA jalacaraviha~ggavasAnAM, kukkuTavasA viShkirashakunivasAnAM, ajamedaH shAkhAdamedasAM, shRu~ggaveraM kandAnAM, mRudvIkA phalAnAM, sharkarekShuvikArANAm, iti prakRutyava hitatamAnAmAhAravikArANAMprAdhAnyato dravyaNi vyAkhyAtAni bhavanti॥३८॥

The most beneficial among food articles are thus:

Red rice (*Oryza Sativa Linn.*) is the best among all cereal crops having bristles, green gram (*phascolus mungalin*) among pulses, rain water (collected directly before falling on ground) among various types of drinking water, rock salt among salts, *jiwanti* (*Leptadenia reticulate W.S.A.*) among pot herbs, antelope (*ena*) among meat of animals, common quail (*lava*) among meat of birds, the iguana (*godha*) among meat of burrowing animals, *rohita* among fishes, cow ghee among ghee, cow milk among milk, the *tila* (sesame) oil among fats of vegetable sources, lard (hog's fat) among the fats of marshy animals, fat of *chuluki* (gangetic dolphin) among fish fat, the fat of *pakahamsa* (white swan) among fats of aquatic birds, the fat of hen among fats of gallinaceous types of birds, the fat of goat among fats of branch-eating animals, ginger among rhizomes and roots, grapes among fruits, and sugar among the products of sugarcane. In this manner, various natural food articles have been identified to be the most wholesome in their class. [38]

### Unwholesome (harmful) food articles

अहिततमानप्युपदेक्ष्यामः:-

यवका: शूकधान्यानामपथ्यतमत्वेन प्रकृष्टतमा भवन्ति, माषा: शमीधान्यानां, वर्षानादेयमुदकानाम्, ऊषरं लवणानां, सर्षपशाकं शाकानां, गोमांसं मृगमांसानां, काणकपोतः पक्षिणां, भैको बिलेशयानां, चिलिचिमो मत्स्यानाम्, आविकं सर्पिः सर्पिषाम्, अविक्षीरं क्षीराणां, कुसुमभस्नेहः स्थावरस्नेहानां, महिषवसाआनूपमृगवसानां, कुम्भीरवसा मत्स्यवसानां, काकमद्गुवसा

जलचरविहङ्गवसानां, चटकवसा विष्किरशुकनिवसानां, हस्तिमेदः शाखादमेदसां, निकुचं फलानाम्, आलुकं कन्दानां, फाणितमिक्षुविकाराणाम्, इतिप्रकृत्यैवाहिततमानामाहारविकाराणां प्रकृष्टतमानि द्रव्याणि व्याख्यातानि भवन्ति; (इति) हिताहितावयवो व्याख्यातआहारविकाराणाम्॥३९॥

ahitatamānapyupadēkṣyāmaḥ-

yavakāḥ śūkadhānyānāmapathyatamatvēna prakṛṣṭatamā bhavanti, māśāḥ śāmīdhānyānāṁ, varṣānādēyamudakānāṁ, ūṣaram lavaṇānāṁ, sarṣapaśākāṁ śākānāṁ, gōmāṁsaṁ mṛgamāṁsānāṁ, kāṇakapōtaḥ pakṣināṁ, bhēkō bilēśayānāṁ, cilicimō matsyānāṁ, āvikāṁsarpiḥ sarpiṣāṁ, avikṣīram kṣīrānāṁ, kusumbhasnēhaḥ sthāvarasnēhānāṁ, mahiṣavasānānūpamṛgavasānāṁ, kumbhīravasā matsyavasānāṁ, kākamadguvasā jalacaravihaṅgavasānāṁ, caṭakavasā viṣkiraśukanivasānāṁ, hastimedāḥ śākhādamēdasāṁ, nikucāṁ phalānāṁ, ālukāṁ kandānāṁ, phāṇitamikṣuvikārānāṁ, iti prakṛtyaivāhitatamānāmāhāravikārānāṁ prakṛṣṭatamāni dravyāṇi vyākhyātānibhavanti; (iti) hitāhitāvayavō vyākhyāta āhāravikārānāṁ॥३९॥

ahitatamAnapyupadekShyAmaH-

yavakAH shUkadAnyAnAmapathyatamatvena prakRuShTatamA [1]bhavanti, mAshaH shamIdhAnyAnAM, varShAnAdeyamudakAnAm, USharaM lavaNAnAM, sarShapashAkaMshAkAnAM, gomAMsaM mRugamAMsAnAM, kANakapotaH pakShiNAM, bheko bilesayAnAM, cilicimomatsyAnAM, AvikaM sarpiH sarpiShAM, avikShIraM kShIraNAM, kusumbhasneHaH sthavarasnēhAnAM, mahiShavaS A AnUpamRugavasAnAM, kumbhIrvavasA matsyavasAnAM, kAkamadguvasAjala caraviha~ggavasAnAM, caTakavasA viShkirashukanivasAnAM, hastimedāH shAkhAdamedasAM, nikucāM phalAnAM, AlukaM kandAnAM, phANitamikShuvikArANAM, itiprakRutyaiVAhitatamAnAmAhAravikArANAM prakRuShTatamAni dravyANI vyAkhyAtAni bhavanti; (iti)hitAhitAvayavo vyAkhyAta AhAravikArANAM॥३९॥

Now here are the most unwholesome of food articles:

*Yavak* (wild barley) is the most unwholesome among cereal crops with bristles, *masha* (*phaseolus radiations linn*) among pulses, river water in the rainy season among types of drinking water, *ushara* (saline soil salt) among salts, mustard leaf among pot herbs, beef among meat of animals, young dove (*kapota*) among meat of birds, frog meat among meat of burrowing animals, *chilichima* meat among meat of fishes, ghee made of sheep's milk among ghee, sheep milk among milk, oil of *kusumba* (*Carthamus tinctorius Linn*) among vegetable fats, fat of the water buffalo among fats of marshy animals, fat of gangetic gharial (*kumbhira*) among the fats of fishes, the fat of water foul among fats of aquatic animal, fat of the sparrow (*chatak*) among fats of gallinaceous types of bird, fat of elephant among fats of branch-eating animals, the *nikucha* (*Atrocarpus nikucha Roxb.*) among fruits, the *aluka* among the bulbs, *phanita* (treacle) among derivatives of sugarcane, etc. These above (mentioned food articles) have been enumerated, each of which is the most unwholesome of its class naturally. The

wholesome food articles and unwholesome food articles have been explained in such context. [39]

### *Agrya samgraha (collections of best food articles, factors and drugs in various conditions)*

अतो भूयः कर्मषधानां च प्राधान्यतः सानुबन्धानि द्रव्याण्यनुव्याख्यास्यामः।

तद्यथा-

अनन्तं वृत्तिकराणां श्रेष्ठम्, उदकमाश्वासकराणां (सुरा श्रमहराणां), क्षीरं जीवनीयानां, मांसं बृंहणीयानां, रसस्तर्पणीयानां, लवणमन्नद्रव्यरुचिकराणाम्, अम्लं हृदयानां, कुक्कटो बल्यानां, नक्ररेतो वृष्याणां, मधुश्लेष्मपित्रप्रशमनानां, सर्पिर्वातपित्रप्रशमनानां, तैलं वातश्लेष्मप्रशमनानां, वमनं श्लेष्महराणां, विरेचनं पित्तहराणां, बस्तिर्वातहराणां, स्वेदो मार्दवकराणां, व्यायामः स्थैर्यकराणां, क्षारः पुस्त्वोपघातिनां, (तिन्दुकमनन्नद्रव्यरुचिकराणाम्,) आमं कपित्थमकण्ठ्यानाम्, आविकं सर्पिरहृदयानाम्, अजाक्षीरं शोषधनस्तन्यसात्म्यरक्तसाङ्गाहिकरक्तपित्रप्रशमनानाम्, अविक्षीरं श्लेष्मपित्रजननानां, महिषीक्षीरं स्वप्नजननानां, मन्दकं दृद्यभिष्यन्दकराणां, गवेधुकान्नं कर्शनीयानाम्, उद्दालकान्नं विरुक्षणीयानाम्, इक्षुमूत्रजननानां, यवाः पुरीषजननानां, जाम्बवं वातजननानां, शष्कल्यः श्लेष्मपित्रजननानां, कलत्था अम्लपित्रजननानां, माषाः श्लेष्मपित्रजननानां, मदनफलं वमनास्थैर्यापनानुवासनोपयोगिनां, त्रिवृत् सुखविरेचनानां, चतुरड्गुलो मटुविरेचनानां, स्नुकपयस्तीक्ष्णविरेचनाना, प्रत्यक्षपष्पा शिरोविरेचनानां, विड्गंगं क्रिमिघ्नानां, शिरीषो विषधनानां, खदिरः कण्ठधनानां, रास्ना वातहराणाम्, ओमलकं वयः स्थापनानां, हरीतकी पथ्यानाम्, एरण्डमूलं वृष्यवातहराणां, पिप्पलीमूलं दीपनीयपाचनीयानाहप्रशमनानां, चित्रकमूलं दीपनीयपाचनीयगुदशोथार्शः शूलहराणां, पुष्करमूलं हिक्ककाश्वासकासपार्श्वशूलहराणां, मुस्तं साङ्गाहिकदीपनीयपाचनीयानाम्, उदीच्यनिर्वापणदीपनीयपाचनीयच्छर्द्यतीसारहराणां, कट्वड्गंगं साङ्गाहिकपाचनीयदीपनीयानाम्, अनन्तासाङ्गाहिकरक्तपित्रप्रशमनानाम्, अमृता साङ्गाहिकवातहरदीपनीयशोणितविबन्धप्रशमनानां, बिल्वसाङ्गाहिकदीपनीयवातकफप्रशमनानाम्, अतिविषा दीपनीयपाचनीयसाङ्गाहिकसर्वदोषहराणाम्, उत्पलकमदपद्मकिञ्जल्कः साङ्गाहिकरक्तपित्रप्रशमनानां, दुरालभा पित्रश्लेष्मप्रशमनानां, गन्धप्रियड्गुः शोणितपित्रातियोगप्रशमनानां, कुटजत्वक् श्लेष्मपित्ररक्तसाङ्गाहिकोपशोषणानां, काशमर्यफलं रक्तसाङ्गाहिकरक्तपित्रप्रशमनानां, पृश्निपर्णी साङ्गाहिकवातहरदीपनीयवृष्याणां, विदारिगन्धा वृष्यसर्वदोषहराणां, बलासाङ्गाहिकबल्यवातहराणां, गोक्षुरको मूत्रकृच्छानिलहराणां, हिङ्गनिर्यासश्छेदनीयदीपनीयानुलोमिकवातकफप्रशमनानाम्, अम्लवेतसो भेदनीयदीपनीयानुलोमिकवातश्लेष्महराणां, यावशूकः संसनीयपाचनीयाशौघ्नानां, तक्राभ्यासोग्रहणीदोषशोफाशौघृतव्याप्तप्रशमनानां, क्रत्यान्मांसरसाभ्यासो ग्रहणीदोषशोषाशौघ्नानां, क्षीरधृताभ्यासो रसायनानां, सर्मधृतसक्तुप्राशाभ्यासो वृष्योदावर्तहराणां, तैलगण्डुषाभ्यासो दन्तबलरुचिकराणां, चन्दनं दुर्गन्धहरदाहनिर्वापणलेपनानां, रास्नागुरुणी शीतापनयनप्रलेपनानां, लामजजकोशीरं दाहत्वग्दोषस्वेदापनयनप्रलेपनानां, कण्ठवातहराभ्यङ्गोपनाहोपयोगिनां, मधुकं चक्षुष्यवृष्यकेश्यकण्ठ्यवर्णर्यविरजनीयरोपणीयानां, वायुः प्राणसञ्जाप्रदानहेतनाम्, अग्निरामस्तम्भशीतशूलोद्वेपनप्रशमनानां, जलं स्तम्भनीयानां, मृदभृष्टलोष्टनिर्वापितमुदकं तृष्णाच्छर्द्यतियोगप्रशमनानाम्, अतिमात्राशनमामपदोषहेतनां, यथाग्न्यभ्यवहाराऽग्निसन्धृक्षणानां, यथासात्म्यं चेष्टाभ्यवहारौ सेव्यानां, कालभोजनमारोग्यकराणां, तप्तिराहारगणानां, वेगसन्धारणमनारोग्यकराणां, मद्यांसौमनस्यजननानां, मद्याक्षेपो धीधृतिस्मृतिहराणां, गुरुभोजनं दुर्विपाककराणाम्, एकाशनभोजनं सुखपरिणामकराणां, स्त्रीष्वतिप्रसङ्गः शोषकराणां, शुक्रवेगनिग्रहः षाण्ड्यकराणां, पराधातनमन्नाश्रद्धाजननानाम्, अनशनमायुषो

ह्रासकराणं प्रमिताशनं कर्शनीयानाम् अजीर्णाद्यशनं ग्रहणीदूषणानां, विषमाशनमग्निवैषम्यकराणं, विरुद्धवीर्याशनंनिन्दतव्याधिकराणं, प्रशमः पथ्यानां, आयासः सर्वापथ्यानां, मिथ्यायोगो व्याधिकराणं, रजस्वलाभिगमनमलक्ष्मीमुखानां, ब्रह्मचर्यमायुष्याणां, परदाराभिगमनमनायुष्याणां, सङ्कल्पो वृष्याणां, दोर्मनस्यमवृष्याणाम्, अयथाबलमारम्भः प्राणोपरोधिना, विषादो रोगवर्धनानां, स्नानं श्रमहराणां, हर्षः प्रीणनानां, शोकः शोषणानां, निवृत्तिः पुष्टिकराणां, पुष्टिः स्वप्नकराणाम्, अतिस्वप्नस्तन्द्राकराणां, सर्वरसाभ्यासो बलकराणाम्, एकरसाभ्यासो दौर्बल्यकराणां, गर्भशल्यमाहार्याणाम्, अजीर्णमुदधार्याणां, बालो मृदुभेषजीयानां, वद्धो याप्यानां, गर्भिणीतीक्ष्णौषधव्यवायव्यायामवर्जनीयानां, सौमनस्यं गर्भधारणानां, सन्निपातो दुश्चकित्स्यानाम्, आमो विषमचिकित्स्यानां, ज्वरो रोगाणां, कुष्ठं दीर्घरोगाणां, राजयक्षमा रोगसमूहाना, प्रमेहोऽनषड्गिणां, जलौकसोऽनुशस्त्राणां, बस्तिस्तन्त्राणां, हिमवानौषधिभमीनां, सोम ओषधीनां, मरुभमिरारोग्यदेशानाम्, अनुपोऽहितदेशानाम्, निर्देशकारित्वमातुरगुणानां, भिषेकिचिकित्साङ्गानां, नास्तिकीवज्यानां, लौल्यं क्लेशकराणाम्, अनिर्देशकारित्वमरिष्टानां, अनिर्वदो वार्तलक्षणानां, वैद्ययसमूहोनिःसंशयकराणं, योगो वैद्यगुणानां, विजानमौषधीनां, शास्त्रसहितस्तर्कः साधनानां, सम्प्रतिपत्तिः काल जानप्रयोजनानाम्, अव्यवसायः कालातिपत्तिहेतूनां, वृष्टकर्मता निःसंशयकराणाम्, असमर्थता भयकराणां, तदविद्यसम्भाषा बुद्धिवर्धनानाम्, आचार्यः शास्त्राधिगमहेतुनाम्, आयुर्वेदोऽमृतानां, सद्वचनमनुष्ठेयानाम्, असद्ग्रहणं सर्वाहितानां, सर्वसन्न्यासः सुखानामिति ॥४०॥

atō bhūyah̄ karmauśadhānāṁ ca prādhānyataḥ sānubandhāni  
 dravyāṇyanuvyākhyāsyāmaḥ।

tadyathā- annam vṛttikarāṇāṁ śrēṣṭham, udakamāsvāsakarāṇāṁ (surā śramaharāṇāṁ ), kṣīramjīvanīyānāṁ, māṁsaṁ bṛmhāṇīyānāṁ, rasastarpaṇīyānāṁ, lavaṇyamannadravyarucikarāṇāṁ, amlāṁhṛdyānāṁ, kukkuṭo balyānāṁ, nakrarētō vṛṣyāṇāṁ, madhu ślēśmapittapraśamanānāṁ, sarpivātappitapraśamanānāṁ, tailam vātaślēśmapraśamanānāṁ, vamanam ślēśmaharāṇāṁ, virēcanāmpittaharāṇāṁ, bastivātaharāṇāṁ, svēdō mārdavakarāṇāṁ, vyāyāmaḥ sthairyakarāṇāṁ, kṣārahpuṁstvōpaghātināṁ, (tindukamanannadravyarucikarāṇāṁ ,) āmaṁ kapithamakanṭhyānāṁ, āvikāṁsarpirahṛdyānāṁ, ajākṣīram  
 sōśaghnaṁstanyasātmyaraktaśāṅgrāhikaraktapittapraśamanānāṁ,  
 avikṣīramślēśmapittajananānāṁ, mahiṣīkṣīram svapnajanānānāṁ, mandakam dadhyabhiṣyandakarāṇāṁ, gavēdhukānnāṁ karśanīyānāṁ, uddālakānnāṁ virūkṣaṇīyānāṁ, iksurmūtrajananānāṁ, yavāḥpurīṣajananānāṁ, jāmbavām vātajananānāṁ, śaṣkulyaḥ ślēśmapittajananānāṁ, kulatthāamlapittajananānāṁ, māśāḥ ślēśmapittajananānāṁ, madanaphalaṁvamanāsthāpanānuvāsanōpayōgiṇāṁ, trivṛt sukhavirēcanānāṁ, caturaṅgulō mṛduvirēcanānāṁ, snukpayastīkṣṇavirēcanānāṁ, pratyakpuṣpā śirōvirēcanānāṁ, viḍaṅgam krimighnānāṁ, śirīṣōviṣaghnānāṁ, khadirah kuṣṭhaghnānāṁ, rāsnā vātaharāṇāṁ, āmalakam vayaḥsthāpanānāṁ, harītakīpathyānāṁ, ēraṇḍamūlaṁ vṛṣyavātaharāṇāṁ, pippalīmūlaṁ dīpanīyapācanīyānāha praśamanānāṁ, citrakamūlaṁ dīpanīyapācanīyāgudaśōthārśahśūlaharāṇāṁ, puṣkaramūlamhikkāśvāsakāsapārśvaśūlaharāṇāṁ, mustam sāṅgrāhikadīpanīyapācanīyānāṁ, udīcyamīrvāpaṇādīpanīyapācanīyacchardyatīsāraharāṇāṁ, kaṭvaṅgam sāṅgrāhikapācanīyadīpanīyānāṁ, anantāsāṅgrāhikaraktapittapraśamanānāṁ, amṛtāsāṅgrāhikavātaharadīpanīyaśleṣmaśōṇitavibandhapraśamanānāṁ,

bilvarṁsāṅgrāhikadīpanīyavātakaphapraśamanānām, ativisā  
dīpanīyapācanīyasāṅgrāhikasarvadōśaharāṇām, utpalakumudapadmakiñjalkah  
sāṅgrāhikaraktaṭapraśamanānām, durālabhā  
pittaślēshmapraśamanānām, gandhapriyaṅguḥ śōṣitapittātiyōgapraśamanānām,  
kuṭajatvak Ślēshmapittaraktasāṅgrāhikōpaśoṣaṇānām, kāśmaryaphalaṁ  
raktasāṅgrāhikaraktaṭapraśamanānām,  
prśniparṇīsāṅgrāhikavātaharadīpanīyavṛṣyāṇām, vidārigandhā  
vṛṣyasarvadōśaharāṇām, balāsāṅgrāhikabalyavātaharāṇām, gōksurakō  
mūtrakṛcchrānilaharāṇām, hiṅguniryāsaśchēdanīyadīpanīyānulōmikavātakaphapraśama  
nānām, amlavētasōbhēdanīyadīpanīyānulōmikavātaślēshmaharāṇām, yāvaśūkah  
sramsanīyapācanīyārśōghnānām, takrābhyaśō  
graḥaṇīdōṣaśōphārśōghṛtavyāpatpraśamanānām,  
kravyānmāṁsarasābhyaśōgrahaṇīdōṣaśōṣārśōghnānām, kṣīraghṛtābhyaśō  
rasāyanānām, samaghr̥tasaktuprāśābhyaśōvṛṣyōdāvartaharāṇām, tailaganḍūṣābhyaśō  
dantabalarucikarāṇām, candanamūrdurgandhaharadāhanirvāpaṇalēpanānām,  
rāsnāguruṇī Śītāpanayanapralēpanānām,  
lāmajjakōśīramdāhatvagdōṣasvēdāpanayanapralēpanānām, kuṣṭham  
vātaharābhyaṅgōpanāhōpayōginām,  
madhukarīcakṣusyavṛṣyakēśyakanṭhyavarnyavirajanīyarōpanīyānām, vāyuh  
prāṇasañjīvapradānahētūnām, agnirāmastambhaśītaśūlōdvēpanapraśamanānām, jalāṁ  
stambhanīyānām, mṛdbhṛṣṭalōṣṭranirvāpitamudakam  
trṣṇācchardyatiyōgapraśamanānām, atimātrāśanamāmapradōṣahētūnām,  
yathāgnyabhyavahārōgnisandhukṣaṇānām, yathāsātmyaṁcēṣṭābhyaṭavahārau  
sēvyānām, kālabhōjanamārōgyakarāṇām,  
trptirāhāraguṇānām, vēgasandhāraṇamanārōgyakarāṇām, madyam  
saumanasyajanānānām, madyākṣēpōdhīdhr̥tismṛtiharāṇām, gurubhōjanām  
durvipākakarāṇām, ēkāśanabhōjanām sukhapariṇāmakarāṇām, strīśvatiprasaṅgaḥ  
śōṣakarāṇām, śukravēganigrahāḥ  
śāṇdyakarāṇām, parāghātanamannāśraddhājanānām, anaśanamāyusō  
hrāsakarāṇām, pramitāśanām karśanīyānām, ajīrṇādhyaśanām grahaṇīdūṣaṇānām,  
viśamāśanamagnivaiśamyakarāṇām, viruddhavīryāśanām ninditavyādhikarāṇām,  
praśamaḥ pathyānām, āyāsaḥ sarvāpathyānām, mithyāyōgō  
vyādhikarāṇām, rajasvalābhigamanamalakṣmīmukhānām,  
brahmacyamāyusyāṇām, paradārābhigamanamanāyusyāṇām, saṅkalpō vṛṣyāṇām,  
daurmanasyamavṛṣyāṇām, ayathābalamārambhah prāṇoparōdhinām, viśādō  
rōgavardhanānām, snānam śramaharāṇām, harṣaḥprīṇānām, śōkaḥ śōṣaṇānām,  
nivṛttiḥ puṣṭikarāṇām, puṣṭihsvapnakarāṇām,  
atisvapnastandrākarāṇām, sarvarasābhyaśō balakarāṇām, ēkarasābhyaśō  
daurbalyakarāṇām, garbhaśalyamāhāryāṇām, ajīrṇamuddhāryāṇām, bālō  
mṛdubhēṣajīyānām, vṛddhō yāpyānām,  
garbhīṇītīkṣṇauṣadheavyavāyavyāyāmavarjanīyānām, saumanasyam  
garbhadhhāraṇānām, sannipātōduścikitsyānām, āmō viśamacikitsyānām, jvarō  
rōgāṇām, kuṣṭham dīrgharōgāṇām, rājayakṣmārōgasamūhānām, pramēhō'nuṣaṅgiṇām,  
jalaukasō'nuṣastrāṇām, bastistantrāṇām, himavānauṣadhibhūmīnām, sōma ḫosadhhīnām,

marubhūmirōgyadēśānām, anūpō'hitadēśānām,nirdēśakāritvamāturaṇuṇāṁ,  
bhiṣak cikitsāṇgānāṁ, nāstikōvarjyānāṁ, laulyāṁ  
klēśakarāṇāṁ,anirdēśakāritvamariṣṭānāṁ, anirvēdō vārtalakṣaṇānāṁ, vaidyasamūhō  
niḥsaṁśayakarāṇāṁ, yōgōvaidyaguṇānāṁ, vijñānamauṣadhiṇāṁ, sāstrasahitastarkaḥ  
sādhanānāṁ, sampratipattiḥkālajñānaprayōjanānāṁ, avyavasāyah kālātipattiḥtētūnāṁ,  
dṛṣṭakarmatā niḥsaṁśayakarāṇāṁ,asamarthatā bhayakarāṇāṁ, tadvidyasambhāṣā  
buddhivardhanānāṁ, ācāryah sāstrādhigamahētūnāṁ,āyurvēdō'mṛtānāṁ,  
sadvacanamanuṣṭhēyānāṁ, asadgrahaṇāṁ [5] sarvāhitānāṁ,  
sarvasannyāsaḥsukhānāmiti||40||

ato bhUyaH karmauShadhAnAM ca prAdhAnyataH sAnubandhAni  
dravyANyanuvyAkhyAsyAmaH|

tadyathA-

annaM vRuttikarANAM shreShTham, udakamAshvAsakarANAM (surA  
shramaharANAM ),kShIraM jlvanlyAnAM, mAMsaM bRuMhaNlyAnAM,  
rasastarpaNlyAnAM,lavaNamannadravyarucikarANAm, amlaM hRudyAnAM, kukkuTo  
balyAnAM, nakrareto vRuShyANAM,madhu shleShmapittapraphamanAnAM,  
sarpirvAtapittapraphamanAnAM, tailaMvAtashleShmapraphamanAnAM, vamanaM  
shleShmaharANAM, virecanaM pittaharANAM,bastirvAtaharANAM, svedo  
mArdavakarANAM, vyAyAmaH sthairyakarANAM, kShAraHpuMstvopaghAtinAM,  
(tindukamanannadravyarucikarANAm ,) AmaM kapitthamakaNThyAnAm,  
AvikaMsarpirahRudyAnAm, ajAkShIraM  
shoShagnastanyasAtmyaraktaśA~ggrAhikaraktapittapraphamanAnAm,avikShIraM  
shleShmapittajananAnAM, mahiShlkShIraM svapnajananAnAM,  
mandakaMdadhyabhiShyandakarANAM, gavedhukAnnaM karshanlyAnAm,  
uddAlakAnnaM virUkShaNlyAnAm,ikShurmUtrajananAnAM, yavAH  
purlShajananAnAM, jAmbavaM vAtajananAnAM,  
shaShkulyaHshleShmapittajananAnAM, kulatthA amlapittajananAnAM, mAŚhAH  
shleShmapittajananAnAM,madanaphalaM vamanAsthApanAnuvAsanopayoginAM,  
trivRut sukhavirecanAnAM, catura~ggulomRuduvirecanAnAM,  
snukpayastlkShNavirecananAM, pratyakpuShpA shirovirecanAnAM,  
viDa~ggaMkrimighnAnAM, shirlSho viShaghnAnAM, khadiraH kuShThaghnAnAM,  
rAsnA vAtaharANAm, AmalakaMvayaHsthApanAnAM, harItakl pathyAnAm,  
eraNDamUlaM vRuShyavAtaharANAM,  
pippallMulaMdIpanlyapAcanlyAnAhaprashamanAnAM,  
citrakamUlaMdIpanlyapAcanlyagudashothArshaHshUlaharANAM,  
puShkaramUlaMhikkAshvAsakAsapArshvashUlaharANAM, mustaM  
sA~ggrAhikadIpanlyapAcanlyAnAm,  
udlcyaMnirvApaNadIpanlyapAcanlyacchardyatlArahAnAM, kaTva~ggaM  
sA~ggrAhikapAcanlyadIpanlyAnAm,anantA sA~ggrAhikaraktapittapraphamanAnAm,  
amRutAsA~ggrAhikavAtaharadIpanlyashleShmashoNitavibandhapraphamanAnAM,  
bilvaMsA~ggrAhikadIpanlyavAtakaphaprashamanAnAm,  
ativiShAdIpanlyapAcanlyasA~ggrAhikasarvadoShaharANAm,  
utpalakumudapadmaki<sub>jjalkaHsA</sub>ggrAhikaraktapittapraphamanAnAM, durAlabhA

pittashleShmaprashamanAnAM,  
gandhapriya~gguHshoNitapittAtiyogaprashamanAnAM, kuTajatvak  
shleShmapittaraktasA~ggrAhikopashoShaNAnAM,kAshmaryaphalaM  
raktasA~ggrAhikaraktapittaprashamanAnAM,  
pRushniparNIlsA~ggrAhikavAtaharadIpalyavRuShyANAM, vidArigandhA  
vRuShyasarvadoShaharANAM, balAsA~ggrAhikabalyavAtaharANAM, gokShurako  
mUtrakRucchrAnilaharANAM,hi~gguniryAsashchedanlyadIpalyAnulomikavAtakaphapr  
ashamanAnAm, amlavetasobhedanlyadIpalyAnulomikavAtashleShmaharANAM,  
yAvashUkaH sraMsanlyapAcanlyArshoghnAnAM,takrAbhyAso  
graHaNIdoShashophArshoghRutavyApatprashamanAnAM,  
kravyAnmAMsarAsAbhyAsograhaNIdoShashoShArshoghnAnAM, kShIraghRutAbhyAso  
rasAyanAnAM, samaghRutasaktuprAshAbhyAsovRuShyodAvartaharANAM,  
tailagaNDUShAbhyAso dantabalarucikarANAM,  
candanaMdurgandhaharadAhanirvApaNalepanAnAM, rAsnAguruNI  
shItApanayanapralepanAnAM,  
IAmajjakoshIraMdAhatvagdoShasvedApanayanapralepanAnAM, kuShThaM  
vAtaharAbhya~ggopanAhopayoginAM,madhukaM  
cakShuShyavRuShyakeshyakaNThyavarNyavirajanlyaropaNIyAnAM,  
vAyuHprANasajjApradAnahetUnAm,  
agnirAmastambhashItashUlodvepanaprashamanAnAM, jalaMstambhanlyAnAM,  
mRudbhRuShTaloShTranirvApitamudakaM  
tRuShNAccardyatiyogaprashamanAnAm,atimAtrAshanamAmapradoShahetUnAM,  
yathAgnyabhyavahAro~agnisandhukShaNAnAM, yathAsAtmyaMceShTAhyavahArau  
seyvAnAM, kAlabhojanamArogyakarANAM,  
tRuptirAhAraguNAnAM,vegasandhAraNamanArogyakarANAM, madyaM  
saumanasyajananAnAM, madyAkShepodhldhRutismRutiharANAM, gurubhojanaM  
durvipAkakarANAm, ekAshanabhojanaMsukhapariNAmakarANAM,  
strIShvativprasa~ggaH shoShakarANAM, shukraveganigrahaHShANDyakarANAM,  
parAghAtanamannAshraddhAjananAnAm, anashanamAyuSho  
hrAsakarANAM,pramitAshanaM karshanlyAnAm, ajIrNAdhyashanaM  
graHaNIdUShaNAnAM,viShamAshanamagnivaiShamyakarANAM,  
viruddhavlvryAshanaM ninditavyAdhikarANAM, prashamaHpathyAnAM, AyAsaH  
sarvApathyAnAM, mithyAyogo  
vyAdhikarANAM,rajasvalAbhigamanamalakShmImukhAnAM,  
brahmacaryamAyuShyANAM,paradArAbhigamanamanAyuShyANAM, sa~gkalpo  
vRuShyANAM, daurmanasyamavRuShyANAm,ayathAbalamArambhaH  
prANoparodhinAM, viShAdo rogavardhanAnAM, snAnaM shramaharANAM,harShaH  
priNanAnAM, shokaH shoShaNAnAM, nivRuttiH puShTikarANAM,  
puShTiHsvapnakarANAm,atisvapnastandrAkarANAM, sarvarasAbhyAso balakarANAm,  
ekarasAbhyAso daurbalyakarANAM,garbhashalyamAhAryANAm,  
ajIrNamuddhAryANAM, bAlo mRudubheShajlyAnAM, vRuddho yApyAnAM,garbhiNI  
tlkShNauShadhavyavAyavyAyAmavarjanlyAnAM, saumanasyaM garbhadhAraNAnAM,  
sannipAtodushcikitsyAnAm, Amo viShamacikitsyAnAM , jvaro rogANAM, kuShThaM  
dlrgharogANAM, rAjayakShmArogasamUhAnAM, prameho<sub>anuSha</sub>ggiNAM,

jalaukasoo~anushastrANAM, bastistantrANAM,himavAnauShadhibhUmlnAM, soma  
 oShadhInAM, marubhUmirArogyadeshAnAm,  
 anUpo~ahitadeshAnAm,nirdeshakAritvamAturaguNAnAM, bhiShak cikitsA~ggAnAM,  
 nAstikovarjyAnAM, laulyaM kleshakarANAm,anirdeshakAritvamariShTAnAM, anirvedo  
 vArtalakShaNAnAM, vaidyasamUho niHsaMshayakarANAm, yogovaidyaguNAnAM,  
 vij~jAnamauShadhInAM, shAstrasahitastarkaH sAdhanAnAM,  
 sampratipattiHkAlaj~jAnaprayojanAnAm, avyavasAyaH kAIAtipattihetUnAM,  
 dRuShTakarmatA niHsaMshayakarANAm,asamarthatA bhayakarANAM,  
 tadvidyasambhAShA buddhivardhanAnAm, AcAryaHshAstrAdhigamahetUnAm,  
 Ayurvedo~amRutAnAM, sadvacanamanuShTheyAnAm, asadgraNaM sarvAhitAnAM,  
 sarvasannyAsaH sukhAnAmiti||40||

In addition to the above mentioned food articles, the table below provides a ready reference of key food articles and Ayurvedic therapies and their superior qualities:

|                                      |  |
|--------------------------------------|--|
| 1. Food (anna)                       | Sustenance of life ( <i>Vrittikara</i> )                             |
| 2.Water (udaka)                      | Production of soothing effect/refreshing agent ( <i>ashwaskara</i> ) |
| 3.Wine (sura)                        | Dispelling fatigue/wine among acopics( <i>shramahara</i> )           |
| 4.Milk (ksheera)                     | Invigorating/vitalizers ( <i>jivaniya</i> )                          |
| 5.Meat (mamsa)                       | Nourishing ( <i>brihmana</i> )                                       |
| 6.Meat soup (mamsa rasa)             | Refreshing/Demulcents ( <i>Tarpana</i> )                             |
| 7.Salt (lavana)                      | Appetizers ( <i>ruchikaraka</i> ) for taste                          |
| 8.Sour things (amlra rasa)           | Tasty medication for the heart ( <i>hridy</i> )                      |
| 9.Meat of chicken (kukkuta mamsa)    | Strength promoting ( <i>balya</i> )                                  |
| 10.Semen of crocodile (nakraretasa)  | Having aphrodisiac action/virility enhancers ( <i>vrishya</i> )      |
| 11.Honey ( <i>madhu</i> )            | Alleviating kapha and pitta ( <i>shlesma pitta prashamana</i> )      |
| 12.Ghee ( <i>ghrita</i> )            | Alleviating vata and pitta (vata pitta prashamana)                   |
| 13. Sesame oil ( <i>tila taila</i> ) | Alleviating vata and kapha (vata shleshmana prashamana”)             |
| 14. Emesis (vamana)                  | Eliminating kapha ( <i>shlesmahara</i> )                             |
| 15.Purgation (virechana)             | Eliminating pitta ( <i>pittahara</i> )                               |
| 16.Enema (basti)                     | Eliminating vata( <i>vatahara</i> )                                  |

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| 17.Fomentation/sudation ( <i>sweda</i> )  | Bringing about smoothness in body/soften the body( <i>mardavakara</i> )  |
| 18.Exercise ( <i>vyayama</i> )  | Bringing about firmness/stability ( <i>sthairyakara</i> )  |
| 19.Alkalies ( <i>kshara</i> )   | Causing impotency/impair manhood ( <i>punsatvopaghata</i> )  |
| 20.Tinduka ( <i>Diospyros Peregrina</i> Gurke)  | Bringing about deliciousness in non-dietetic food articles. The false mangosteen among appetizers ( <i>annadravyaruchikara</i> )                             |
| 21.Unripe <i>Kapittha</i> ( <i>Feronia Limonia</i> Swingle) or unripe wood apple          | Producing harmful effect on throat ( <i>akanthyanam</i> )  |
| 22.Ghee of sheep milk ( <i>Avika sarpi</i> )  | Producing bad effect on heart/Non cardinals ( <i>ahridryakara</i> )  |
| 23.Goat milk ( <i>ajaksheera</i> )  | Producing wholesome and galactogogue effect, and curing consumption, and <i>raktapitta</i> (A disease characterized by bleeding from different part of body) |
| 24.Sheep milk ( <i>aviksheera</i> )   | Vitiating kapha and pitta ( <i>shleshmana pitta janana</i> )   |
| 25.Buffalo milk ( <i>mahishi ksheera</i> )  | Inducing sleep ( <i>swapna janana</i> )  |
| 26.Immature (incompletely formed) curd ( <i>mandak dadhi</i> )                            | Obstructing channels of circulation/viscidifying agents ( <i>abhishyandakara</i> )   |
| 27.Food Prepared of boiled Job's tears/ <i>gavedhuka</i> [ <i>Tritium aestivum</i> Linn.] | Emaciating/depleters ( <i>karshaniya</i> )   |
| 28.Food prepared of boiled <i>uddalaka</i> ( <i>Paspalum scrobiculatum</i> )              | Drying/reduces unctuous element in body ( <i>virukshaniya</i> )  |
| 29.Sugarcane ( <i>ikshu</i> )   | Produces diuresis / increases quantity of urine ( <i>mutrajanana</i> )   |
| 30.Barley ( <i>yava</i> )   | Increasing quantity of feces ( <i>purishajanana</i> )  |
| 31. <i>Jambu</i> [ <i>Syzygium cumini</i> skeels]   | Aggraviating vata (vata janana)  |

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| 32. <i>Shashkuli</i> (type of pastry) (or oils)                                     | Provokes kapha and pitta ( <i>shleshma pitta janana</i> )  |
| 33. <i>Kulattha</i> ( <i>Dolichos biflorus</i> Linn) or horse gram                  | Causes <i>amlapitta</i> (acid dyspepsia)   |
| 34. <i>Masha</i> ( <i>Phaseolous radiates</i> Linn or black gram)                   | Increase of kapha and pitta( <i>shleshmana pitta janana</i> )  |
| 35.Fruit of <i>madana</i> [Randiadumetorum Lam.] or emetic Nut                      | Used in emesis, and corrective and unctuous enema ( <i>Vamana asthapanaanuvasanopayogi</i> ”)                |
| 36. <i>Trivrita</i> [ <i>Operculina turpethum</i> R.B.] or turpeth                  | Causes easy purgation ( <i>sukha virechana</i> )   |
| 37. <i>Aragvadha</i> [ <i>Cassia fistula</i> Linn]                                  | Causes mild purgation ( <i>mridu virechana</i> )   |
| 38.Milk of <i>Snuhi</i> [ <i>Euphorbia nerifolia</i> Linn.] thorny milk hedge plant | Causing strong purgations ( <i>tikshna virechana</i> )   |
| 39. <i>Apamarga</i> [ <i>Achyranthes aspera</i> Linn.] Rough chaff                  | Eliminating doshas from head/these are errhines ( <i>shiro virechana</i> )                                   |
| 40. <i>Vidanga</i> [ <i>Embelia ribes</i> Bur M.F.]                                 | Killing parasites/among all Anthelmintics ( <i>krimighna</i> )   |
| 41. <i>Shirisha</i> [ <i>Albizzia lebbeck</i> Benth.]                               | Produces antitoxic effects/among all antidotes ( <i>vishaghna</i> )  |
| 42. <i>Khadira</i> [ <i>Acacia catechu</i> Willd.]                                  | Curing obstinate skin disease including leprosy/dermic remedies ( <i>kushtaghna</i> )                        |
| 43. <i>Rasna</i> [ <i>Pluchea lanceolata</i> Oliver and Hiern]                      | Alleviating vata ( <i>vatahara</i> )   |
| 44. <i>Amalaka</i> [ <i>Emblica officinalis</i> Gaern] or Emblic Myrobalan          | Anti-ageing / causing rejuvenation ( <i>vaya sthapana</i> )  |
| 45. <i>Haritaki</i> [ <i>Terminalia Chebula</i> ] or Chebulic Myrobalan             | Producing wholesome effect ( <i>pathya</i> )   |
| 46.Root of <i>Eranda</i> [ <i>Ricinus communis</i> Linn] or castor oil              | Increasing virility and alleviating vata ( <i>vrishya vatahara</i> )   |
| 47.Root of <i>pippali</i> [ <i>Piper longum</i> Linn] or long pepper                | Digestive stimulant, carminative, relieves abdominal distension ( <i>Deepaniya pachaniya anahprasamana</i> ) |

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| 48.Root of <i>chitraka</i> [Plumbago Zeylanica] or white flowered lead wort   | Promotes digestion, carmination,inflammation in anal region, curing of piles, subside colic pain [ <i>Deepaniya pachaniya gudashotha arshashula haranam</i> ]                        |
| 49. <i>Pushkaramula</i> [ <i>Inula racemosa</i> ] or orris root   | Curtive of hiccups, dyspnea, pleurodynea, cough ( <i>Hikka shwasa kasa parshvashulahara</i> )  |
| 50. <i>Musta</i> [ <i>Cyperus rotundus Linn.</i> ] or Nut grass   | Causing astringent effect, promoting digestion & carmination ( <i>Sangrahika deepaniya pachaniya</i> )   |
| 51. <i>Udichya</i> ( <i>Pavonia adorata Willd.</i> ) or fragrant Sticky Mallow  | Producing cooling effect (refrigerant), promoting digestion and carmination curing vomiting and diarrhea ( <i>Nirvapana dipaniya pachaniya chhardi atisarahara</i> )                 |
| 52. <i>Shyonaka</i> [ <i>Oroxylum indicum Vent.</i> ] or free of heaven or <i>katvanga</i>  | Causing astringent effect, digestive stimulant, digestives ( <i>Sangrahika pachaniya dipaniyanam</i> )   |
| 53. <i>Ananta</i> [ <i>Hemidesmus indicus R.B.</i> ] or Indian sarsaparilla   | Causing astringent, curing <i>raktapitta</i> ( <i>Sangrahika raktapitta prashama</i> )   |
| 54. <i>Guduchi</i> [ <i>Tinospora Cordifolia miers</i> ] or <i>amrita</i>   | Act as astringent, curative of vata, promotes digestion, curative of vitiation of kapha and blood ( <i>sangrahika vataharadipaniya shleshma shonita vibandha prashamana</i> ).       |
| 55. <i>Bilva</i> [ <i>Aegle Marmelos Corr</i> ] or bael   | Causing astringent effect, promote digestion, alleviating vata and kapha ( <i>sangrahika dipaniya vata kapha prashamana</i> )  |
| 56. <i>Ativisha</i> ( <i>Aconitum Heterophyllum wall</i> ) or atips   | Causing astringent effect, promote digestion, carmination and alleviating all the dosha or curative of all the disorders. ( <i>dipaniya pachaniya sangrahika sarvadoshaharanam</i> ) |
| 57.Pollens of <i>utpala</i> [ <i>Nymphaea alba Linn.</i> ], <i>kumuda</i> (a variety of <i>utpala</i> ) and <i>padma</i> [ <i>Nelumbo</i> | Astringent effect, alleviating <i>raktapitta</i> ( <i>sangrahika raktapitta prashamana</i> ).  |

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| nucifera gaertn.] or pollen of blue<br>and white water lilies                                 |   |
| 58. <i>Duralabha</i> [Fagonia Cretica<br>Linn.] or cretsn prickly clover                      | Curative of pitta and kapha (pitta<br>shleshma prashamana)  |
| 59. <i>Priyangu</i> [Callicarpa<br>macrophylla Vahi.] or the perfumed<br>cherry               | Alleviate the plethoric condition of<br>blood and pitta ( <i>shonita pittatiyoga<br/>prashamana</i> )   |
| 60.Bark of <i>kutaja</i> [Holarrhena<br>antidyscenterica wall.] or <i>kurchi</i><br>bark      | Among astringent and dessicant of<br>kapha, pitta and the blood<br>( <i>shlesma pitta<br/>raktasangrahikopsosananam</i> ).<br>Causing haemostasis and curing<br><i>raktapitta</i> ( <i>Rakta sangrahika<br/>raktapitta prashamana</i> ) |
| 61.Fruit of <i>kashmari</i> (Gmelina<br>arboria) or fruit of white teak                       | Causing astringent effect,<br>alleviating vata and promoting<br>digestion and virility (aphrodisiac)<br>( <i>sangrahika vatahara dipaniya<br/>vrishyanam</i> )  |
| 62. <i>Prishniparni</i> (Uraria picta Desv.)<br>or painted leaved uraria                      | Aphrodisiac effect and alleviating<br>all the dosha. ( <i>Vrishya<br/>sarvadoshaharanam</i> )   |
| 63. <i>Shalaparni</i> (Desmodium<br>gangetium D.C.) or tick trefoil or<br><i>vidarigandha</i> | Having astringent effect, promoting<br>strength, curative of vata<br>( <i>sangrahikopshoshananam</i> ).<br>Curing dysuria & vata<br>( <i>mutrakrichchra anilahara</i> )   |
| 64. <i>Bala</i> (Sida Cordifolia Linn.) or<br>the heart leaved sida                           | Causing excision or split up the<br>morbid humours, digestive<br>stimulant corrective of peristalsis or<br>downward movement of vata.<br>Alleviates of vata and kapha<br>(chedaniya dipaniya anulomika<br>vata kapha prashamananam)     |
| 65. <i>Gokshura</i> (Tribulus terrestris<br>Linn.) or the small calatrops                     | Causing purgation (laxatives)<br>digestive stimulant, corrective of<br>peristalsis and curative of vata and<br>kapha (bhedaniya dipaniya<br>anulomika vata shleshman<br>haranam).   |
| 66.Extract of <i>hingu</i> (Ferula narthex<br>Boiss) or asafetida                             |   |
| 67. Amlavetasa (Rheum emodi<br>wall.)   |   |

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| 68. Yavasukah (barley ash)  | Having laxative effect causing carmination, curing piles, (stramsana pachana arshoghna)   |
| 69. Habitual use of buttermilk (Takrabhyasa)  | Curing grahani (gastrointestinal disorders) oedema, piles, and complication due to improper administration of oleation therapy) (grahanidosha shopha arshoghrityapatprasaman) |
| 70. Habitual use of meat soup of carnivorous animal (kravyad Mamsa rasaabhyas)  | Curing Grahani (gastrointestinal disorders) (or curing of assimilation disorders, consumption and piles (grahanidosha shosha arshognanam)                                     |
| 71. Habitual use of milk & ghee (kshiraghritabhyasa)  | Causing rejuvenation (vitilizers) (rasayananam)   |
| 72. Habitual use of diet consisting of equal part of ghee and roasted corn flour (samaghrutasaktuprashabhyas)   | Promoting virility (seminiferous) and cures misperistalsis (vrishya udavartaharanam)  |
| 73. Habitual gargling with tila oil (taila gandusha abhyas)   | Promoting taste of food and strength of teeth. (danta bala ruchikaranam)  |
| 74. Application of sandalwood paste   | Removes foul odour and removes burning sensation of body (durgandhahar daha nirvapanlepananam)  |
| 75. Application of rasna (Pluchea lenciolata Oliver and Hiern.) or Indian groundsel and aguru [Aquilaaria agallocha Roxb.] in ointment form or eagle wood | Application of these dispel coldness of body (shita panayanpralepananam).   |
| 76. Lamajjaka or geranium grass (Cymbopogon Jivarancusa Schult) and ushira (Vetiveria Zizanioides Nash.) or cus-cus                                       | Cures burning sensation skin deseases and sweating (daha tvaga dosha swedapanayan).   |
| 77. Massage and poultice of kushtha (Saussurea lappa C.B. Clarke)   | Alleviating vata (Vatahara) and useful in unctions and poultices (vatahara abhyangopanahopayoginan)   |
| 78. Madhuka (Glycyrrhiza glabra Linn.) or liquorice   | Beneficial for eye, virility, the hair, throat, completion and promote  |

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|   | pigmentation and Healing<br>(cakshushya vrishya keshya<br>kanthya varnya viranjaniya)   |
| 79.Fresh air (vayu)   | Restores animation and<br>consciousness (or gives life)<br>(pranasajna pradana hetunam)   |
| 80.Heat (agni)  | Curative of ama disorder (or curing<br>indigestion), stiffness, chill, colic<br>pain and shivering (ama stambha<br>shita shulodvepana prashamana) |
| 81.Water (jala)   | Produces astringent effect<br>(stambhaniyanam)  |
| 82.Water with a hot clod of earth<br>plunged therein (Mrud bhrushta<br>loshtra nirvapit udaka)                                  | Alleviates acute attack of thirst and<br>vomiting (trishna chhardi atiyoga<br>prashaman)  |
| 83.Intake of food in excess<br>quantity (Atimatrashana)   | Causes serious indigestion or<br>inductive ama disorders<br>(Amapradosha hetunam)   |
| 84.Intake of food according to<br>power of digestion (yatha agnya<br>abhyavahara)   | Promoting digestion (agni<br>sandhukshnanam)  |
| 85.Wholesome diet and regimen<br>(Yatha satmya cheshtbhavahara)<br>or eating and working in conformity<br>to one's constitution | Worth adopting regimen or among<br>good practices (sevyanam)  |
| 86.Intake of food in time<br>(kalabhojana)  | Healthy practices or promote<br>health (arogyakaranam)  |
| 87.Contentment or satisfaction<br>(trupti)  | Qualities of food or properties of<br>food (ahara gunanam)  |
| 88.Suppression of natural urges<br>(Vegasandharana)   | Unhealthy practices or causes ill<br>health (anarogyakaranam)   |
| 89.Wine (madya)   | Exhilarating<br>(saumanasyajananam)   |
| 90.Intoxication due to excessive<br>drinking (madyaakshepa)   | Causes loss of intelligence,<br>patience and memory (resolution)<br>(dhi dhriti smriti haranam)   |
| 91.Heavy food eating (guru<br>bhojana)  | Causes indigestion or misdigestion<br>(durvipaka)   |
| 92.Intake of food only once in 24<br>hours (ekashanbhojana)   | Bringing about happiness or that<br>conduce to easy digestion and   |

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|  | assimilation (sukha parinama karanam)   |
| 93.Excessive indulgence in sexual act (strishva atiprasanga)   | Causing consumption (shoshakaranam)   |
| 94.Suppression of urge of seminal ejaculation (shukraveganigraha)  | Causing impotency (shandhyakaranam)   |
| 95.The sight of a slaughtering place (paraghatanam)  | That destroy the inclination for food or causing aversion for food (anna ashraaddhajanan) |
| 96.Fasting or abstinence from food (anashana)  | That tend to curtail life or reduces longevity (ayusho hrasakaranam)                      |
| 97.Under eating or intake of food in reduced quantity (pramitashanam)                                    | That tend to reduce a person or causing emaciation (karshaniyanam)                        |
| 98.Predigestion meal or intake of meal before the digestion of previous meal (ajirna adhyashana)         | Induces the assimilation disorder or causes impairment of grahani (grahani dushana)       |
| 99.Intake of irregular meal (vishamashana)   | Causing irregularity in digestive power (agnivaishamyakaranam)                            |
| 100.Intake of food having mutually contradictory property or antagonistic property (viruddha viryashana) | Leads to eight censurable diseases (nindita vyadhikaranam)                                |
| 101.Self restraint or tranquility (prashamah)  | That are wholesome or healthy regimen (pathyanam)   |
| 102.Exertion/straining on self (ayasa)   | Unwholesome/unhealthy regimen (sarva apathyam)  |
| 103.Wrong indulgence/improper utilization (of object of sense) (mithya yoga)                             | Generate diseases (Vyadhikaranam)   |
| 104.Sex with a menstruating woman (rajaswala abhigamana)   | That is inauspicious (alaksmimukhanam)  |
| 105.Celibacy/continence (brahmacharya)   | Promote longevity (ayushyanam)  |
| 106.Adultery (paradara abhigamana)   | Reducing longevity (anayushyanam)   |
| 107.Determination (sankalpa)   | Aphrodisiacs/virility enhancer (vrushyanam)   |
| 108.Unhappiness/Disgust (daurmanasya)  | Loss of virility (avrushyanam)  |

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|---|--|
| 109. Strenuous efforts exceeding the limit's of one's own capacity (ayathabalamarambha) | Shortening of lifespan (pranoparodhinam)   |
| 110. Grief (vishada)  | Aggravation of diseases (rogavardhananam)  |
| 111. Bath (snana)   | Removes fatigue (shramaharanam)  |
| 112. Cheerfulness/joy (harsha)  | Gives delight (prinanamanam)   |
| 113. Worry/grief (shoka)  | Emaciating/wasting (shoshananam)   |
| 114. Nourishment (pushti)   | Causing good sleep (swapnakaranam)   |
| 115. Excessive sleep (atiswapna)  | Causing drowsiness (tandrakaranam)   |
| 116. Detachment/inactivity (nivrutti)   | Promote corpulence/nourishing (pushtikaranam)  |
| 117. Regular intake of diet of all taste/habitual use of food (sarvarasa abhyasa)       | Promote strength (balakaranam)   |
| 118. Regular intake of food having only one taste (eka rasabhyas)                       | Causing weakness (daurbalyakaranam)  |
| 119. Dead or obstructing foetus (garbhashalya)  | Required to be extracted (aharyanam)   |
| 120. Indigestion (ajirna)   | Requiring to be expelled out (by emesis) (uddharyanam).  |
| 121. Child/infant (bala)  | Requires mild drug/medicatives (mrudu bheshajyanam)  |
| 122. Old person (vriddha)   | Who requires palliative treatment (yapyanam)   |
| 123. Pregnant woman (garbhini)  | Requiring abstinence from the intake of strong medicines, resorting to sexual act and excess physical exercise (tikshna aushadha vyavaya vyayama varjaniyanam) |
| 124. Happiness or cheerful spirit (saumanasya)  | Helping retention of conception (garbadharanam).   |
| 125. Disease due to vitiation of all the three dosha (sannipata)                        | Causing difficulty in cure (dushchikitsya)   |

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| 126.Poisoning due to amavisham<br>(Product of improper Metabolism)<br>and digestion | Causing incurable disease or<br>irremediable (achikitsya)                            |
| 127.Fever (jwara)   | Important disease (roganam)  |
| 128.Kushtha or dermatosis<br>(Obstinate skin disease including<br>leprosy (kushtha) | Among chronic disease<br>(dirgharoganam)   |
| 129.Rajayakshma (pthysis)   | Combination of diseases or among<br>syndrome of disease<br>(rogasamuhanam)           |
| 130.Prameha (obstinate urinary<br>disorder including diabetis mellitus)             | Among relapsing diseases<br>(anushamginam)   |
| 131.Leech (jalauka)   | Auxilliary surgical devices<br>(anushastranam)                                       |
| 132.Enema (basti)   | Among those requiring practical<br>technique or elimination<br>therapies(tantranama) |
| 133.The Himalayas<br>(Himvanaushadhi)   | Habitats of medicinal plant<br>(bhuminam)  |
| 134.Soma  | Among herbs (aushadhinama)   |
| 135.Desert/ arid region<br>(marubhumi)  | Among sanatoria or healthy places<br>(arogya deshanam)                               |
| 136.Marshy land or wet region<br>(anupa)  | Among unhealthy places (Ahita<br>deshanam).  |
| 137.Compliance with the<br>instruction of the physician<br>(Nirdeshakaritva)        | Qualities of patients<br>(Aturagunnam)   |
| 138.Physician (Bhishak)   | Among factors of therapeutics or<br>Among aspects of treatment<br>(chikitsa anganam) |
| 139.An atheist/disbeliever (nastika)  | Among those who are to be<br>avoided/boycott (varjyanam)                             |
| 140.Greed or yielding to temptation<br>(laulya)                                     | Troublesome practices or causes<br>mortification (klesha karanam)                    |
| 141.Disobedience to the instruction<br>of physician (Anirdeshakaritva)              | Bad prognostic sign. (Arishtanam)  |
| 142.Self confidence or zest for life<br>(anirveda)                                  | Signs of recovery or among<br>attributes of health<br>(vartalakshanam)               |

|   |  |
|---|--|
| 143.An assemblage of physicians<br>(vaidyasamuha)                                   | Helps to resolve doubts<br>(nihsamshaya karanam)   |
| 144.Sense of propriety or practical skill (yoga)                                    | Among qualities of physician<br>(vaidyagunam)  |
| 145.Applied scientific knowledge or proper understanding (vijnanam)                 | In pharmacology or therapeutic devices (aushadhinam).  |
| 146.Reasoning based on scriptures (shastra sahitatarka)                             | Among mean of knowledge or devices for success (sadhananam)  |
| 147.Presence of mind or sense of propriety (sampratipatti)                          | Among the result accruing from a knowledge of time or timely grasp of situation<br>(Kalajnanaprayojananam) |
| 148.Inaction or Indolence<br>(Adhyavasaya)  | Among the causes of procrastination or waste of time<br>(kalatipattihetunam)                               |
| 149.Practical experience (drushta karmata)  | Among those that resolve doubts<br>(nihsamshayakaranam)  |
| 150.Incapability/Incompetency (asamarthata)   | Terrifying factors/phobia creating factors (bhayakaranam)  |
| 151.Clinical seminars/discussion (tadvidyasambhasha)                                | Increasing wisdom or that broaden one's understanding<br>(buddhivardhananam)                               |
| 152.The teacher/preceptors (acharya)  | Who helps in the acquisition of learning or providing scriptural knowledge<br>(shastradhigamahetunam)      |
| 153. Knowlwdge of Ayurveda (Science of living being)                                | Among elixirs or bringing about immortality (Amrutanam)  |
| 154.Good percepts or words of noble person (sadvachana)                             | Among those that deserve to be practised or requiring to be complied with (anushtheyanam)                  |
| 155.Words of wicked or misunderstanding (asadgrahana)                               | Leading to harmful result or that is injurious (sarva ahitanam)  |
| 156.An absolute detachment from action or renunciation of all thing (sarva sanyasa) | Giving happiness (sukhanam)  |

भवन्ति चात्र- अग्न्याणां शतमुद्दिष्टं यद्द्विपञ्चाशदुत्तरम्। अलमेतद्विकाराणां विघातायोपदिश्यते॥४१॥

bhavanti cātra- agryāṇāṁ śatamuddistāṁ yaddvipañcāśaduttaram| alamētadvikārāṇāṁ vighātāyōpadiśyatē||41||

bhavanti cAtra- agryANAM shatamuddiShTaM yaddvipa~jcAshaduttaram| alametadvikArANAM vighAtAyopadishyate||41||

Thus, it is said –

The foremost in their class, one hundred and fifty-two varieties of the best drug, regimen, etc. have been explained as enumerated above. These are sufficient for guiding treatment of various diseases. [41]

### Use in therapeutics

समानकारिणो येऽर्थास्तेषां श्रेष्ठस्य लक्षणम्।

ज्यायस्त्वं कार्यकर्तृत्वे वरत्वं चाप्युदाहृतम्॥४२॥

वातपित्तकफानां च यद्यत् प्रशमने हितम्।

प्राधान्यतश्च निर्दिष्टं यद्व्याधिहरमुत्तमम्॥४३॥

एतन्निशम्य निपुणं चिकित्सां सम्प्रयोजयेत्।

एवं कुर्वन् सदा वैद्यो धर्मकामौ समश्नुते॥४४॥

pathyam patho'napētarāṁ yadyaccōktarāṁ manasaḥ priyam|

yaccāpriyamapathyam ca niyatam tanna lakṣayēt||45||

mātrākālakriyābhūmidēhadōṣaguṇāntaram |

prāpya tattaddhi dṛśyantē tē tē bhāvāstathā tathā||46||

tasmāt svabhāvō nirdiṣṭastathā mātrādirāśrayah|

tadapēkṣyōbhayaṁ karma prayōjyaṁ siddhimicchatā||47||

samAnakAriNo ye~arthAsteShAM shreShThasya lakShaNam|

jyAyastvaM kAryakartRutve varatvaM cApyudAhRutam||42||

vAtapittakaphAnAM ca yadyat prashamane hitam|

prAdhAnyatashca nirdiShTaM yadvYAdhiharamuttamam||43||

etannishamya nipuNaM cikitsAM samprayojayet|

evaM kurvan sadA vaidyo dharmakAmau samashnute||44||

Thus, this chapter provided a detailed list of dietary preparations and therapies having superior qualities that keep a person healthy. The most effective medicines to pacify vata, pitta and kapha are described. A skillful physician should prescribe the right

dietary regimen and therapy after gaining a thorough understanding of the qualities of these articles. Only then does he attain his dharma(duties) and kama(all desires) [42-44]

### *Pathya (wholesome regimen)*

पथ्यं पथोऽनपेतं यद्यच्चोक्तं मनसः प्रियम् यच्चाप्रियमपथ्यं च नियतं तन्न लक्षयेत्॥४५॥

मात्राकालक्रियाभूमिदेहोषगुणान्तरम् | प्राप्य तत्तदधि दृश्यन्ते ते ते भावास्तथा तथा॥४६॥

तस्मात् स्वभावो निर्दिष्टस्तथा मात्रादिराश्रयः | तदपेक्ष्योभयं कर्म प्रयोज्यं सिद्धिमिच्छता॥४७॥

pathyam patho'napetaṁ yadyaccōktam manasaḥ priyam| yaccāpriyamapathyam ca niyataṁ tanna lakṣayēt||45||

mātrākālakriyābhūmidēhadōṣagunāntaram | prāpya tattaddhi dṛśyantē tē tē bhāvāstathā tathā||46||

tasmāt svabhāvō nirdiṣṭastathā mātrādirāśrayah| tadapēkṣyōbhayaṁ karma prayōjyaṁ siddhimicchatā||47||

pathyaM patho~anapetaM yadyaccoktaM manasaH priyam| yaccApriyamapathyAM ca niyataM tanna lakShayet||45||

mAtrAkAlakriyAbhUmidehadoShaguNAntaram | prApya tattaddhi dRushyante te te bhAvAstathA tathA||46||

tasmAt svabhAvo nirdiShTastathA mAtrAdirAshrayaH| tadapekShyobhayaM karma prayojyaM siddhimicchatA||47||

The dietary articles and activities that do not adversely affect the body systems and are liked by the mind are regarded as *pathya* (wholesome). Likewise, dietary articles and activities that adversely affect the body system and are disliked by the mind are regarded as unwholesome. This is, however, not a cardinal rule, and food articles and drugs do have a variety of effects depending on the dosage, time, mode of preparation, geographical location, the body constitution of the patient, and dosha.

Hence, the physician who desires success in treatment shall consider effects of the natural properties of drugs and dietary articles, as well as the usage patterns associated with such articles. [45-47].

### Agnivesha's query regarding *asava* (self generated fermented alcoholic beverages)

तदात्रेयस्य भगवतो वचनमनुनिशम्य पुनरपि भगवन्तमात्रेयमग्निवेश उवाच-

यथोददेशमभिनिर्दिष्टः केवलोऽयमर्थो भगवता श्रुतश्चास्माभिः।

आसवद्रव्याणामिदानीमनपवादं लक्षणमनतिसङ्क्षेपेणोपदिश्यमानं शुश्रूषामह इति॥४८॥

tadātrēyasya bhagavatō vacanamanuniśamya punarapi bhagavantamātrēyamagnivēśa  
uvāca-

yathōddēśamabhinirdiṣṭahkēvalō'yamarthō bhagavatā śrutaścāsmābhiḥ|

āsavadravyāṇāmidānīmanapavādām lakṣaṇamanatisaṅkṣēpēṇōpadiśyamānam  
śuśrūṣāmaha iti||48||

tadAtreyasya bhagavato vacanamanunishamya punarapi  
bhagavantamAtreyamagnivesha uvAca-

yathoddeshamabhinirdiShTaHkevalo~ayamartho [1] bhagavatA shrutashcAsmAbhiH|

AsavadravyANAmidAnimanapavAdaM  
lakShaNamanatisa~gkShepeNopadishyamAnaM shushrUShAmaha iti||48||

Having listened to this above statement of the Lord Atreya, Agnivesha once again asked Lord Atreya, "O Lord, this subject has been dealt with exhaustively as proposed and we have followed it too. Now we would like to hear from you a detailed and precise description of the ingredients that get into *asava* (alcoholic) preparations." [48]

**Explanation by Atreya about *asava* (self generated fermented alcoholic preparation)**

तमुवाच भगवानात्रेयः-

धान्यफलमूलसारपुष्पकाण्डपत्त्वचो भवन्त्यासवयोनयोऽग्निवेश! सङ्ग्रहेणाष्टौ शर्करानवमीकाः|

तास्वेव द्रव्यसंयोगकरणतोऽपरिसङ्ख्येयासु यथापर्थ्यतमानामासवानां चतुरशीतिं निबोध|

तद्यथा-

सुरासौवीरतुषोदकमैरेयमेदकधान्याम्लाः षड् धान्यासवा

भवन्ति, मृद्वीकाखर्जूरकाश्मर्यधन्वनराजादनतृणशून्यपरुषकाभ्यामलकमृगलिणिकाजाम्बवकपित्थ-

कवलबद्रकर्कन्धुपीलुप्रियालपनसन्यग्रोधाश्वतथप्लक्षकपीतनोदुम्बराजमोदशृङ्गाटकशाङ्खिनीफलास  
वाः

षड्विंशतिर्भवन्ति, विदारिगन्धाश्वगन्धाकृष्णगन्धाशतावरीश्यामात्रिवृद्दन्तीद्रवन्तीबिल्वोरुबूकचित्रकमू  
लैरेकादश

मूलासवा

भवन्ति, शालप्रियकाश्वकर्णचन्दनस्यन्दनखदिरकदरसप्तपर्णार्जुनासनारिमेदतिन्दुककिणिहीशमी-शुक्ति  
शिंशपाशिरीषवञ्जलधन्वनमधूकैः सारासवा

विंशतिर्भवन्ति, पदमोत्पलनलिकुमुदसौगन्धिकपुण्डरीकशतपत्रमधूकप्रियङ्गुधातकीपुष्पैदश पुष्पासवा  
भवन्ति, इक्षुकाण्डेक्षिवक्षुवालिकापुण्ड्रकचतुर्थाः काण्डासवा भवन्ति, पटोलताडकपत्रासवौ द्रवौ

भवतः, तिल्वकलोधैलवालुकक्रमुकचतुर्थस्त्वगासवा भवन्ति, शर्करासव एक एवेति।

एवमेषामासवानां चतुरशीतिः परस्परेणासंसृष्टानामासवद्रव्याणामुपनिर्दिष्टा भवति।

एषामासवानामासुत्त्वादासवसञ्जा।  
द्रव्यसंयोगविभागविस्तारस्त्वेषां बहुविधकल्पः संस्कारश्च।  
यथास्वं संयोगसंस्कारसंस्कृता ह्यासवाः स्वं कर्म कुर्वन्ति।  
संयोगसंस्कारदेशकालमात्रादयश्च भावास्त्वेषां तेषामासवानां ते ते समुपदिश्यन्ते  
तत्त्वार्थमभिसमीक्ष्येति॥४९॥

tamuvāca bhagavānātrēyaḥ-  
dhānyaphalamūlasārapuṣpakāṇḍapatratvacō  
bhavantyāsavayōnayō!gnivēśa!saṅgrahēṇāṣṭau śarkarānavamīkāḥ|  
tāsvēva dravyasamīgakaraṇatō'parisaṅkhyēyāsu yathāpathyatamānāmāsavānāṁ  
caturaśītim nibōdha|  
tadyathā- surāsauvīratuṣōdakamairēyamēdakadhānyāmlāḥ ṣad dhānyāsavā  
bhavanti,mṛdvīkākharjūrakāśmaryadhanvanarājādanatṛṇāśūnyaparūṣakābhayāmalaka  
mṛgaliṇḍikājāmbavakapittha-  
kuvalabadarakarkandhupīlupriyālapanasanyagrōdhāśvatthaplakṣakapītanōdumbarājam  
ōdaśr̄ngāṭakaśāṅkhinīphalāsavāḥṣadviṁśatirbhavanti,vidā  
rigandhāśvagandhākṛṣṇagandhāśatāvarīśyāmātrivṛddantīdravantībilvōrubūkacitrakamūl  
airēkādaśa mūlāsavābhavanti,  
śālapriyakāśvakarṇacandanasyandanakhadirakadarasaptaparnārijunāsanārimēdatinduk  
akiṇihīśamī-  
śuktisimśapāśirīśavañjaladhanvanamadhūkaiḥ  
sārāsavā  
viṁśatirbhavanti,padmōtpalanalikumudasaugandhikapuṇḍarīkaśatapatramadhūkapriyaṅ  
gudhātakīpuṣpairdaśa puṣpāsavā  
bhavanti,ikṣukāṇḍēkṣvikṣuvālikāpuṇḍrakacaturthāḥ kāṇḍāsavā bhavanti,  
paṭōlatāḍakapatrāsavau dvau  
bhavataḥ,tilvakalōdhrailavālukakramukacaturthāstvagāsavā bhavanti, śarkarāsava ēka  
ēvētiḥ  
ēvamēśāmāsavānāṁ caturaśītih parasparēṇāsaṁsṛṣṭānāmāsavadravyāṇāmupanirdiṣṭā  
bhavati|  
ēśāmāsavānāmāsutatvādāsavasañjñā|  
dravyasamīgavibhāgavistārastvēśāṁ bahuvidhakalpaḥ saṁskāraśca|  
yathāsvāṁ samīgasaṁskārasaṁskṛtā hyāsavāḥ svarṇ karma kurvantī|

sarṇyōgasamāskāradēśakālamātrādayaśca bhāvastēśāṁ tēśāmāsavānāṁ tē tē samupadiṣyantētattatkāryamabhisamīkṣyēti||49||

tamuvAca bhagavAnAtreyaH- dhAnyaphalamUlasArapuShpakANDapatratvaco bhavantyAsavayonayo~agnivesha! sa~ggraheNASHausharkarAnavamlkAH|

tAsveva dravyasaMyogakaraNato<sub>aparisa</sub>gkhleyAsu [2] yathApathyatamAnAmAsavAnAM caturashltiM nibodha|

tadyathA- surAsauvIratuShodakamaireyamedakadhAnyAmIAH ShaD dhAnyAsavA [3]

bhavanti,mRudvlkAkharjUrakAshmaryadhanvanarAjAdanatRuNashUnyaparUShakAbha yAmalakamRugaliNDikAjAmbavakapiththa-

kuvalabadarakarkandhupllupriyAlapanasanyagrodhAshvatthaplakShakapitanodumbarAj amodashRu<sub>ggATakashA</sub>gkhinlphalAsavAHShaDviMshatirbhav

anti,vidArigandhAshvagandhAkRuShNagandhAshatAvarlshyAmAtrivRuddantIdravantIbi IvorubUkacitrakamUlairekAdasha mUIAsavAbhavanti,

shAlapriyakAshvakarNacandanasyandanakhadirakadarasaptaparNArjunAsanArimedati ndukakiNihlshaml-

shuktishiMshapAshirlShava~jjaladhanvanamadhUkaiH sArAsavA [4]

viMshatirbhavanti,padmotpalanalikumudasaugandhikapuNDarlkashatapatramadhUkapri ya~ggudhAtaklpuShpairdasha puShpAsavA

bhavanti,ikShukANDekShvikShuvAlikApuNDrakacaturthAH kANDAsavA bhavanti, paTolatADakapatrAsavau [5] dvau

bhavataH,tilvakalodhrailavAlukakramukacaturthAstvagAsavA bhavanti, sharkarAsava eka eveti|

evameShAmAsavAnAM caturashltiH  
parasparesNAsaMsRuShTAnAmAsavadrvyANAmupanirdiShTA bhavati|

eShAmAsavAnAmAsutatvAdAsavasa<sub>jj</sub>A|

dravyasaMyogavibhAgavistArastveShAM [6] bahuvidhakalpaH saMskArashca|

yathAsvaM saMyogasaMskArasaMskRutA hyAsavAH svam karma kurvanti|

saMyogasaMskAradeshakAlamAtrAdayashca bhAvAsteShAM teShAmAsavAnAM te te samupadishyantetattatkAryamabhisamlkShyeti||49||

Lord Atreya replied to him, “O Agnivesha! In brief there are eight types of ingredients that are used in alcoholic preparations: grains, fruits, roots, pith, flowers, branches, leaves, and barks. The ninth additive is sugar. *Asava* is innumerable because there could be innumerable combinations of ingredients and methods for preparation. However, 84 *asavas* are regarded very wholesome:

- *Dhanyasava* (alcoholic preparation from grain): There are six alcoholic preparations made from grain (*dhanyasava*) viz. *sura*, *sauvira*, *tushodaka*, *maireya*, *medaka*, and *dhanyamla*.
- *Phalasava* (alcoholic preparation from the following fruits): *Grapes* (draksha, *vitis vinifera* Linn), *kharjura* (*phoerix sylvestrys* Roxb), *kashmarya* (Fruit of white teak, *Gmelina arborea* Linn), *dhanvana* (*Grewia tiliaefolia* vohl.), *rajadana* (Indian ape flower, *Mimusops hexanodra* soland), *parushaka* (sweet falsah, *Geusa asiatica* soland, *abhaya* (*Terminalia chebula* Linn), *amalaka* (*Emblica Officinalis* Gaertn.), *mrigalindika* (gooseberry, *Terminalia belerica* Roxb.), *jambu* (*Syzygium cermini* skills), *kapitha* (wood apple, *Foronia limonia* swingle), *kuvala* (jujube, *Zizyphus* *Sativa* Gaertn), *badara* (small jujube, *Zizyphus jujube* Lam.), *karkandhu* (Wild jujube, *Zizyphus nummularia* W.A.), *pilu* (*Salvadora Persica* Linn.), *priyāla* (buchanan's mango, *Buchanania lanzen* Sreng.), *panas* (Indian Jack, *Artocarpus heterophyllus* lam.), *nyagrodha* (banyan, *Ficus bengalensis* Linn.), *ashvattha* (holy Fig, *Ficus religiosa* linn), *plaksha* (*Ficus lacor* Buch-Nam), *kapitana* (*Albizia lebbeck* Benth), *udumbara* (*Ficus recemosa* Linn.), *ajmoda* (*Trachyspermum roxburghii* Anum), *shringataka* (*Trapa bispinosa* Roxb.), *shankhini* (*Etenolepsis cansocora* decussate Roem.). Thus, there are twenty-six fruits from which *phalasava* (alcoholic preparations using fruit) are prepared.
- *Mulasava* (alcoholic preparation from roots): There are eleven *mulasava* (alcoholic preparations made by root). The roots are : *vidarigandha* (*Shalaparni*, *Desmodium gangeticum* DC), *ashvagandha* (*Withania Somnifera* Dunal), *kṛiṣṇagandha* (drumstick, *Moringa Oleifera* Lam.), *shatavari* (climbing asparagus, *Asparagus racemosus* wild), *shyama* (Black turpeth, *Operculina turpethum*), *trivṛit* (Red physic-nut), *danti* (physic-nut, *Baliospermum montanum* Muell-Arg.), *dravanti* (*Jatropha glandulifera* Roxb), *bilva* (*Aegle marmelos* corr.), *eranda* (Castor-pil plant, *Ricinus communis* Linn) and *chitraka* (plumbago *zeylanica* Linn.).
- *Sarasava* (alcoholic preparation from pith or tree-pulp): *Shala* (*Shorea robusta* Gaertn.), *priyaka* (*Buchanania Lanzen* Spreng.) *aśvakarna* (small sala), *chandana* (Sandalwood, *Santalum album* linn), *syandana* (timisa, oojein black wood), *khadira* (catechu, *Acacia catechu* Willd), *kadara* (Gun arabiatrie), *saptaparna* (*Ditabark*, *Alstonia Scholaris* R. Br.), *arjuna* (*Terminalia arjuna*), *asana* (aplinous Kino, *Terminalia tomentosa*), *arimeda*, *tinduka* (False mangosteen, *Diospyrus peregrine* Gurke), *kinihī* (White Sirsa), *shami* (Thamee, *Prosopis spicigera* Linn.), *shukti* (Badar, *Zizyphus Jujuba* Lann.), *shimshapa* (*Dalbergia Sisso* Roxb.), *shirisha* (*Albizia lebbeck* Benth), *vanjula*, *dhanvana* (Common Indian linden, *Greusa ileaefolia* vahl), *madhuka* (*Madhuka Indica*). The pulp or *sara* of these twenty trees are considered to be ideal for preparation of *asava*.
- *Pushpasava* (alcoholic preparation from flowers): *Padma* (Red lotus, *Nelumbo nucifera* Gaertn), *utpala* (Blue water lily, *Nymphaea alba*), *nalina* (indigo lotus), *kumuda* (Night-flowering Lotus), *sanghandhika* (fragrant white lotus), *pundarika* (*Nymphaea lotus* linn), *shatapatra* (centripetal lotus), *madhuka* (*Madhuka Indica*), *priyangu* (perfumed cherry, *Calliarpa macrophylla*), and *dhataki* (Fulsee flower,

*woodfordia fruticosa kurz*). These ten flowers are considered suitable for making *pushpasava*.

- *Kandasava* (alcoholic preparation from stem): *Ikshu* (Sugar cane), *kandeksu* (big sugar lane, *Saccharum Spontanum* lim), *iksvuvallika* (*Asteracanth longifilia* Ness), *pundraka* (white Sugercane). The *kanda* (stem) of these four plants are considered ideal for making *kandasava* (alcoholic preparation of stem).
- *Patrasava* (alcoholic preparation from leaves): *Patola* (Wild Snake gourd, *Trichosanthes culumerina* Linn), and *padaka* (palmyra palm, *Borassus flabellifer* lin). The leaves of these two plants are considered best suited for preparation of *patrasava* (alcoholic preparation from leaves).
- *Twagasava* (alcoholic preparation from bark): *Tilvaka* (*Viburnum nervosum*), *Iodhra* (*Symplocos racemosa Roxb.*], *elavaluka* (cherry, *Brunus cerasus*), and *karmuka* (*Aroca catchu linn.*). The barks of these four trees are used for making *twagasava* (alcoholic preparations from barks).
- *Sharakarasava* (alcoholic preparation from sugar): Sugar is the only one thing from which *sharakarasava* (sugar wine) is prepared.

Using each of these ingredients exclusively (i.e., without mixing or combining with any other additive or ingredient) results in eighty four varieties of alcoholic preparations. All these are known as *asava* (self generated alcoholic preparation) because of the process of fermentation involved in their preparation. The outcome or result of these *asavas* (alcoholic preparations) is based on the combination, properties of ingredients and the process or method of preparation. Thus, a skillful Ayurvedic practitioner proficient in the art of preparing *asavas* should be able to concoct a preparation with the right combination of ingredients, depending upon the *doshas* of the patient, his physical constitution, time, season, location, and other factors [48-49]

### Beneficial effects of *asava*

भवति चात्र-

मनःशरीराग्निबलप्रदानामस्वप्नशोकारुचिनाशनानाम्।

संहर्षणानां प्रवरासवानामशीतिरुक्ता चतुरुत्तरैषा॥५०॥

bhavati cātra-

manahśarīrāgnibalapradānāmasvapnaśōkārucināśanānām।

sarñharṣaṇānāṁ pravarāsavānāmaśītiruktā caturuttaraiṣā॥५०॥

bhavati cAtra-

manaHsharIrAgnibalapradAnAmasvapnashokArucinAshanAnAm|

saMharShaNAnAM pravarAsavAnAmashItiruktA caturuttaraiShA||50||

Here is the verse, again –

The eighty four types of best alcoholic preparations have been enumerated that strengthen the mind, body and digestive power. Such preparations dispel insomnia, depression, anorexia and induce exhilaration. [50]

## Summary

तत्र श्लोकः:

शरीररोगप्रकृतौ मतानि तत्वेन चाहारविनिश्चयं च। उवाच यज्जः पुरुषादिकेऽस्मिन् मुनिस्तथाऽग्न्याणि  
वरासवांश्च॥५१॥

tatra ślōkaḥ- śarīrarōgaprakṛtau matāni tattvēna cāhāraviniścayam ca| uvāca  
yajjaḥpuruṣādikē'smin munistathā'gryāṇi varāsavāṁśca||51||

tatra shlokaH- sharIrarogaprakRutau matAni tattvena cAhAravinishcayaM ca| uvAca  
yajjaHpuruShAdike~asmin munistathA~agryANi varAsavAMshca||51||

Here is the verse –

In this chapter titled *Yajjah Purushiya* (Origin of the Human Being), sages debated upon the origin of human being and diseases with different thoughts on the topic. Finally, Lord Atreya presented his view on the most wholesome and unwholesome food articles (eatables as well as beverages). [51]

## Tattva Vimarsha (Fundamental Principles)

- Multiple factors like *atma* (spirit), *manas* (mind), *rasa* (fluid), *shad dhatu* (six elements), *matru-pitru* (parents), *karma* (past deeds), *swabhava* (nature), *prajapati* (Creator), and *kala* (time) have been considered as the source of creation of the *purusha* (human beings). The same factors are considered responsible for origin of diseases.
- In order to sustain health, one shall follow a wholesome diet and restrain from following unwholesome diets and activities.
- The best things shall be used as first choice in various respective conditions (*samgraha*).
- Those food articles that help maintain a state of equilibrium among body elements (*dhatu*) and also help in eliminating imbalances that could occur due to abnormalities are considered to be wholesome food articles, while those articles that act in an opposite manner are unwholesome articles.
- Classification of food articles could be done by their suitability for consumption, source (vegetarian or non-vegetarian), effects on body (wholesome or unwholesome), mode of consumption (to eat, to drink, to chew or to lick), six tastes and twenty (*guna*) qualities. There could be innumerable combinations.
- Dietary preparations and drugs that do not affect the body system adversely, and those that are liked by the mind are considered *pathya* (wholesome). Likewise, those that adversely affect the body system and are disliked by the mind are considered *apathyā* (unwholesome).

- Drugs and food articles are also considered wholesome or unwholesome depending upon the dose (measure), time, mode of preparation, habitat of the drugs or food articles, body constitution, and dosha.
- Asava (alcoholic preparation, wine) are prepared by the process of fermentation. Combinations possible for preparing *asava* are unlimited.
- The effect of *asava* depends upon the combination and properties of ingredients used, as well as the process or method of preparation, duration of fermentation (time), place of preparation, mode of preservation, quantity etc.
- *Asavas* help in strengthening the mind, body and digestive power. Such preparations dispel insomnia, depression, anorexia and induce exhilaration.

## Vidhi Vimarsha (Applied Inferences)

- An Ayurvedic practitioner proficient in therapeutics, dietetics, or preparation of the various forms of *asava* should know the properties and attributes of all ingredients, as well as the expected effects of the preparation of the said drug.
- Of the innumerable combinations of food articles and beverages, 152 forms of eatables and therapies, and 84 forms of alcoholic beverages are known to be wholesome. As per Lord Atreya, wholesome foods are the key source of creation of the *purusha*, and unwholesome food of diseases.
- Food and physical regimen that are beneficial to the body and mind are called *pathya* and those that are harmful are called *apathyā*.
- A food or beverage's therapeutic properties also depend upon quantity, season, way of preparation, soil, place and dosha.
- 84 types of *asava* (fermented products), contain probiotics and have effect on body, mind and digestive power are listed indicating gut brain relationship. They help in regulation of sleep, appetite and mental activity.

## Wholesome and unwholesome factors for holistic human being

Diet and lifestyle habits can favorably or adversely impact the development of holistic human being (*purusha*). Therefore, wholesome dietary and lifestyle factors are described in this chapter. A list of unwholesome dietary factors that can play role in etiopathogenesis of a disease is also given. Both are equally important in providing healthcare to an individual.

## Classification of dietary articles and its utility

The best and worst food items in categories of cereals, pulses, milk, meat classes, oils, vegetables etc. are described based upon their beneficial and harmful effects on human biology. The beneficial food items can be used judiciously for health preservation and prevention of diseases.

## Agrya sangraha: A ready to use index in healthcare

Agrya samgraha is an index of all items that are beneficial in healthcare management. It includes a description of actions of various food preparations (aharavikara), medicines (aushadha), and associated factors (anubandhini). It is imperative to note that when more than one action (karma) is attributed to one factor, it is describing the collective action and not each action separately. The pharmacological activity profiles of dietary, medicinal and lifestyle factors can be easily referred from the list. Vagbhata focuses on specific dravya and its action in a particular disease.[A.Hr. Uttara Tantra 40] <sup>225</sup>

Superiority attributed in the list is relative to other materials (dravya) having similar actions. Some examples are given below. The following table extends description of articles listed in agrya samgraha [Gangadhara on Cha.Sa.Sutra Sthana 25/40], their clinical utility referred in pathology and management of diseases and current evidences to support their activities.

| Best article<br>(agrya)   | Indication &<br>research<br>reference  | Other article<br>having similar<br>action  | Examples of<br>practical usage               |
|---|--|--|--|
| 1. Food (anna)  | Sustenance of<br>life (vrittikara)   - | Even in the<br>context of<br>langhana, light<br>food (laghu<br>asana) is<br>advised for<br>patient for<br>sustenance of<br>life, if the<br>strength of the<br>patient is too<br>low.[Cha.Sa.<br>Nidana |  |
| Sthana 1/36],<br>[A. Hr. Chikitsa<br>Sthana 1/2] <sup>226</sup> |  |  |  |
| 2.Water<br>(udaka)  | Acts as soothing<br>and refreshing     | Assurance<br>therapy,<br>soothing words,   | Washing face<br>with cold water<br>after any |

<sup>225</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>226</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

| Best article<br>(agrya) | Indication &<br>research<br>reference<br>agent<br>(ashwaskara)   | Other article<br>having similar<br>action<br>monetary<br>support, etc.  | Examples of<br>practical usage<br>exertion like<br>walking,<br>purificatory<br>procedures<br>(shodhana) like<br>vamana etc.,<br>surgical<br>procedures.[Su.<br>Sa. Sutra<br>Sthana 5/17] <sup>227</sup> |
|-------------------------|--|---|---|
| 3.Wine (sura)           | Dispelling<br>fatigue/wine<br>among acopics<br>(shramahara)  | Rest in<br>comfortable<br>position and<br>suitable<br>accommodation   | Citation needed   |
| 4.Milk<br>(ksheera)     | Invigorating/vital<br>izers (jivaniya),<br>milk and dairy<br>product good for<br>health <sup>228</sup> | Cold air, water,<br>herbal tonics,<br>Crepidium<br>acuminatum<br>(jivaka), Malaxis<br>muscifera<br>(rishabhaka) like<br>herbs | Milk is advised<br>for patients<br>debilitated with<br>fever as vitalizer<br>[Cha.Sa.Chikits<br>a Sthana 3/169]   |
| 5.Meat<br>(mamsa)       | Nourishing<br>(brimhana),Role<br>of poultry meat   | Sweet<br>substances,<br>black gram<br>(masha)   | Various meat<br>preparations are<br>advised for<br>patients of<br>debilitating  |

<sup>227</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

<sup>228</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

| Best article<br>(agrya)      | Indication &<br>research<br>reference<br>in a balanced<br>diet <sup>229</sup> | Other article<br>having similar<br>action  | Examples of<br>practical usage<br>disorders<br>(rajayakshma)<br>where there is<br>severe depletion<br>of strength and<br>loss of<br>muscles.[Cha.S<br>a.Chikitsa<br>Sthana 8/149] |
|------------------------------|---|--|---|
| 6.Meat soup<br>(mamsa rasa)  | Refreshing/Dem<br>ulcents<br>(tarpana)  | Curd,<br>substances with<br>sour taste, Piper<br>retrofractum<br>(kola), Ziziphus<br>jujube (badara)<br>etc. | Meat soup<br>preparations in<br>debilitating<br>disorders<br>(rajayakshma),<br>fever (jwara) etc<br>[Cha.Sa.Chikitsa<br>Sthana 8/149]   |
| 7.Salt (lavana)              | Appetizer<br>(ruchikaraka) for<br>taste                                       | Black pepper<br>(maricha),<br>Ginger<br>(ardraka),<br>substances with<br>a sour taste                        | Salt is a major<br>ingredient in<br>various<br>medicines for<br>anorexia<br>(arocaka).<br>[A.Hr.Chikitsa<br>Sthana 1/71-72]<br><sup>230</sup>                                     |
| 8.Sour things<br>(amla rasa) | Tasty<br>medication for<br>the heart<br>(hridya)                              | Foods which are<br>pleasing to the<br>mind such as<br>milk, curd,<br>sugar, and other<br>five tastes         | Formulations for<br>virechana are<br>made palatable<br>using sour fruits<br>like Punica   |

<sup>229</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

<sup>230</sup> Sushruta. Uttara Tantra, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. Sushruta Samhita. 8th ed. Varanasi: Chaukhamba Orientalia;2005.

| Best article<br>(agrya)                    | Indication &<br>research<br>reference  | Other article<br>having similar<br>action | Examples of<br>practical usage   |
|--|--|---|--|
| 9.Meat of<br>chicken<br>(kukkutamamsa<br>) | Strength<br>promoting<br>(balya)   | Ghee, milk                                | Meat of chicken<br>is mentioned in<br>various<br>aphrodisiac<br>medicines, in<br>patients<br>debilitated by<br>fever (jwara)<br>and in injuries to<br>various vital<br>points.<br>[Cha.Sa.Chikitsa<br>Sthana 2/1/44]<br>(Vrishyakukkuta<br>mamsaprayoga) |
| 10.Semen of<br>crocodile<br>(nakraretasa)  | Has aphrodisiac<br>action/virility<br>enhancers<br>(vrishya)                                 | Milk, ghee                                | Used in various<br>aphrodisiac<br>preparations.[C<br>ha.Sa.Chikitsa<br>Sthana 2/1/44]<br>(Vrishya kukkuta<br>mamsa<br>prayoga)   |
| 11.Honey<br>(madhu)                        | Alleviates<br>[[/kapha] and [[pit<br>ta kapha] and<br>pitta (shlesma<br>pitta<br>prashamana) | Barley, wheat                             | –  |
| 12.Ghee<br>(ghrita)                        | Alleviates vata<br>and pitta (vata<br>pitta<br>prashamana)                                   | Milk                                      | –  |
| 13. Sesame oil<br>(tila taila)             | Alleviates vata<br>and kapha (vata<br>shleshmana<br>prashamana)                              | Ripe tamarind<br>(pakva tintidika)        | –  |

| Best article<br>(agrya)                  | Indication &<br>research<br>reference   | Other article<br>having similar<br>action  | Examples of<br>practical usage  |
|--|---|--|---|
| 14. Emesis<br>(vamana)                   | Eliminates<br>kapha<br>(shlesmahara)  | Fasting<br>(upavasa)   | —   |
| 15.Purgation<br>(virechana)              | Eliminates pitta<br>(pittahara)   | Drinks and<br>foods which<br>reduce pitta  | —   |
| 16.Enema<br>(basti)                      | Eliminates vata<br>(vatahara)   | Unction therapy<br>(snehana<br>karma)  | —   |
| 17.Fomentation/<br>sudation<br>(swedana) | Brings<br>smoothness and<br>soften the body<br>tissues<br>(mardavakara),<br>Role of<br>sweating in<br>human health <sup>231</sup> | Massage<br>(mardana<br>karma)  | swedana is<br>used to bring<br>softness to<br>affected skin in<br>skin diseases<br>(kushtha) and in<br>ulcers (vrana).<br>[Cha.Sa.Chikits<br>a Sthana 7/50] |
| 18.Exercise<br>(vyayama)                 | Brings firmness<br>of body and<br>stability<br>(sthairyakara),b<br>enefits of<br>physical<br>exercise <sup>232</sup>              | Other drinks<br>and foods which<br>brings about<br>firmness/stabilit<br>y (sthairyakara) | It is<br>emphatically<br>advised in<br>diabetes<br>(premeha) to<br>bring back the<br>firmness in the<br>body.<br>[Cha.Sa.Chikits<br>a Sthana 6/50]          |
| 19.Alkalies<br>(kshara)                  | Causing<br>impotency/impai<br>r manhood<br>(punsatvopagh<br>ta)   | Chikpea<br>(Chanaka)   | Alkalies are<br>mentioned as a<br>causative factor<br>for vitiation of<br>reproductive<br>system  |

<sup>231</sup> Vaghbata. Uttara Sthana, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. Ashtanga Hridayam. 1st ed. Varanasi: Krishnadas Academy;2000.

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| Best article<br>(agrya)  | Indication &<br>research<br>reference  | Other article<br>having similar<br>action  | Examples of<br>practical usage<br>(sukravaha<br>srotas).<br>[Cha.Sa.Vimana |
|--|--|--|--|
| Sthana 5/19]   |  |  |  |
| 20. Diospyros Peregrina Gurke (Tinduka)                            | Provides deliciousness to non-dietetic food articles.<br>The false mangosteen among appetizers (annadravyaruc hikara)                                      | Jamun (Jambu)  | –  |
| 21. Unripe Feronia Limonia Swingle (kapittha) or unripe wood apple | Causes harmful effect on the throat (akanthyanam)  | Substances of astringent (kashaya) taste like the fruit of Mimusops elengi (bakula)  | –  |
| 22. Ghee of sheep milk (avikasarpi)                                | Produces bad effect on heart/Non-cordials (ahridryakara)   | Ghee of milk of camel  | –  |
| 23. Goat milk (ajaksheera)   | Produces wholesome and galactagogue effect, and cures consumption, and bleeding disorders (raktapitta), Advances in dairy goat products <sup>233</sup>   – | Goat milk is used in bleeding disorders (raktapitta) where vata dosha is predominant.<br>[Cha.Sa.Chikitsa Sthana 4/83]<br>Goat milk is advised for various |  |

<sup>233</sup> extract sourced from

<http://cosbin2001.blogspot.com/2014/12/health-benefits-of-jaggery-or-gur.html>

| Best article<br>(agrya)   | Indication &<br>research<br>reference   | Other article<br>having similar<br>action   | Examples of<br>practical usage  |
|---|---|---|---|
|   |   | purposes in the<br>treatment of<br>consumption.<br>[Su.Sa.Uttara<br>Sthana 42/56]<br><sup>234</sup>   |   |
| 26. Immature<br>(incompletely<br>formed) curd<br>(mandakdadhi)        | Obstructs<br>channels of<br>circulation/viscid<br>ifying agents<br>(abhishyandaka<br>ra)      | —   | Immature curd<br>is mentioned as<br>a major<br>causative factor<br>for diseases like<br>edema (shotha)<br>and diabetes<br>(prameha),<br>erysipelas<br>(visarpa) where<br>obstruction of<br>channels<br>(abhisyandana)<br>is a major<br>pathogenesis.<br>[Cha.Sa.Chikits<br>a Sthana 12/6],<br>[Cha.Sa.Chikits<br>a Sthana 4/5],<br>[Cha.Sa.Chikits<br>a Sthana 21/18] |
| 27. Food<br>Prepared of<br>boiled Tritium<br>aestivum Linn.<br>(Job's | Emaciating/depl<br>eters<br>(karshaniya), Pro<br>perties of Wheat<br>grass <sup>235</sup>   — | Gruel recipe<br>advised for<br>emaciation is<br>prepared out of<br>food prepared of<br>boiled Tritium |   |

<sup>234</sup> Shastri KN, Chaturvedi GN, Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shastri KN, Chaturvedi GN, Editors. Vidyotini Commentary Charak Samhita.1st ed. Varanasi: Chaukhamba Bharti Academy;2004.

<sup>235</sup> Shukla VD, Tripathi RD. Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shukla VD, Tripathi RD Vaidyamanorama Commentary Charak Samhita.1st ed. Delhi; Chaukhamba Sanskrit Pratisthana, 2002.

| Best article<br>(agrya)<br>tears/gavedhuk<br>a)                             | Indication &<br>research<br>reference                           | Other article<br>having similar<br>action<br>aestivum<br>(gavedhukaann<br>am).<br>[Cha.Sa.Sutra<br>Sthana 2/25] | Examples of<br>practical usage   |
|---|---|---|--|
| 28.Food<br>prepared of<br>boiled<br>Paspalum<br>scrobiculatum<br>(uddalaka) | Drying/reduces<br>unctuous<br>element in body<br>(virukshaniya) | –   | Paspalum<br>scrobiculatum<br>(uddalaka) is<br>mentioned<br>where drying<br>([rukshana]) is<br>intended as a<br>treatment, for<br>example in<br>treatment of<br>Diabetes<br>(prameha), skin<br>diseases<br>(kushttha)<br>etc.[Su.Sa.Chiki<br>tsa Sthana<br>11/6],<br>[Su.Sa.Chikitsa<br>Sthana 9/5] <sup>236</sup> It<br>is also<br>mentioned in<br>the treatment of<br>complications of<br>intake of<br>unctuous<br>materials<br>(snehapana).<br>[A.S.Sutra<br>Sthana 25/39]<br><sup>237</sup> |

<sup>236</sup> Chandola HM, Bhatia S. Concept of Diabetes mellitus in Ayurveda and its treatment with certain indigenous drugs. AYU Int 2001;1:84-87.

<sup>237</sup> Tripathi SN, Chandola HM. Study on variations in diabetes mellitus (Prameha) with special reference to plasma insulin, cortisol and catecholamines. In Bajaj

|  | Indication & research reference  | Other article having similar action   | Examples of practical usage |
|--|--|---|-----------------------------|
| Best article<br>(agrya)                |  |   |                             |
| 29. Sugarcane<br>(ikshu)               | Produces diuresis / increases the quantity of urine (mutrajanana), Health aspects of sugarcane <sup>238</sup><br>  -   | Sugarcane (ikshu) is described twice in treatment of dysuria caused by pitta.<br>[Cha.Sa.Chikitsa Sthana 26/49] |                             |
|  |  | ,<br>[Cha.Sa.Chikitsa Sthana 26/50]   |                             |
| 30. Barley<br>(yava)                   | Increases fecal bulk (purishajanana), effect of barley on bowel movements <sup>239</sup><br>Effect of whole-grain barley on the human fecal microbiota. <sup>240</sup>   - | Barley is used in the treatment of depletion of faeces.<br>[Cha.Sa.Sharira Sthana 6/11]                         |                             |
| 37. Cassia fistula Linn<br>(aragvadha) | Causes mild purgation (mriduvirechana ), Health  | Cassia fistula (aragvadha) used in various formulations for   |                             |

JS,ed. Diabetes mellitus in Developing Countries. New Delhi, India: Interprint, 1984:125-128.

<sup>238</sup> Sharma H, Chandola HM..Prameha in Ayurveda: Correlation with Obesity, Metabolic Syndrome, and Diabetes Mellitus.Part 1-Etiology, Classification, and Pathogenesis. The Journal of Alternative and Complementary Medicine.2011. 17(6):491-496.

<sup>239</sup> Kajaria Divya, Chandola H.M. Dislipidemia Cause or Consequence of Diabetes- Reanalyzing the pathogenesis with the vision of Ayurveda. Journal of Diabetes and Health, Photon. 2014.

<sup>240</sup> Pandey Rashmi, Dubey N., Tripathi NS. Ayurvedic Concept of Lifestyle Ailments and its Healing Through Traditional Regimen., 2015, Scholars Journal of Applied Medical Sciences, 3(3H):1599-1601

| Best article<br>(agrya)  | Indication &<br>research<br>reference<br>benefits of<br>Cassia fistula <sup>241</sup><br>  –   | Other article<br>having similar<br>action<br>jaundice<br>(kamala), where<br>mild purgation is<br>advised.[A.Hr.C<br>hikitsa Sthana<br>16/41] <sup>242</sup> | Examples of<br>practical usage   |
|--|--|---|--|
| 38. Milk of<br>Euphorbia<br>nerifolia<br>Linn.(snuhi/thor<br>ny milk hedge<br>plant) | Causes strong<br>purgation<br>(tikshnavirechan<br>a), health<br>benefits of<br>Euphorbia <sup>243</sup>   –<br>  –                                   |   |  |
| 39.<br>Achyranthes<br>aspera Linn.<br>/Rough chaff<br>(apamarga)                     | Eliminate<br>doshas from<br>head/these are<br>errhines<br>(shirovirechana)<br>, Effect of<br>Achyranthes<br>aspera on<br>inflammation <sup>244</sup> | –   | It is the first<br>drug mentioned<br>for nasal<br>instillation<br>(nasya)<br>[I/Cha.Sa.[[Sutr<br>a_Sthana Cha.S<br>a.Sutra |
| Sthana 2/3]  |  |   |  |
| 40. Embelia<br>ribes (vidanga)   | Kills<br>parasites/amon<br>g all<br>anthelmintics<br>(krimighna),  | Embelia ribes<br>(vidanga) is<br>described<br>numerous times<br>in Vyadhita<br>Rupiya Vimana<br>in the  |  |

<sup>241</sup> Kumar Manish, Kivadassanavar MB et al. Screening of Serum Insulin in Obese Individual WSR to Sthaulya: An Observational Study. 2016. European Journal of Pharmaceutical and Medical Research, 2016,3(9),638-640

<sup>242</sup> extracts from [http://www.jbsoweb.com/admin/php/uploads/215\\_pdf.pdf](http://www.jbsoweb.com/admin/php/uploads/215_pdf.pdf)

<sup>243</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>244</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

| Best article<br>(agrya)   | Indication &<br>research<br>reference<br>anthelmintic<br>Herbs <sup>245</sup>   – | Other article<br>having similar<br>action<br>management of<br>parasites/micro<br>organisams<br>(krimi) eg.<br>[Cha.Sa.Vimana | Examples of<br>practical usage |
|---|---|--|--------------------------------|
| <p>Sthana 7/17], [Cha.Sa.Vimana Sthana 7/19],[Cha.Sa.Vimana Sthana 7/21], [Cha.Sa.Vimana Sthana 7/22], [Cha. Sa.Vimana Sthana 7/23-24], [Cha.Sa.Vimana Sthana 7/25], [Cha.Sa.Vimana Sthana 7/26] etc.      41. Albizzia lebbeck (shirisha)   Produces antitoxic effects/among all antidotes (vishaghna), anti-inflammatory activity of Albizzia lebbeck<sup>246</sup>   –   Formulations like Shirishadi nasya and anjana, Panchashirisha agada, Gandhahasti agada, Mahagandhahasti agada, Amrita ghrita and numerous other descriptions in Visha Chikitsa [Cha.Sa.Chikitsa Sthana 23/51-52], [Cha.Sa.Chikitsa Sthana 23/53], [Cha.Sa.Chikitsa Sthana 23/99], [Cha.Sa.Chikitsa Sthana 23/201-202], [Cha.Sa.Chikitsa Sthana 23/204], [Cha.Sa.Chikitsa Sthana 23/212-214]      42. Acacia catechu (khadira)   Cures obstinate skin disease including leprosy/dermic remedies (kushtaghna), anti-bacterial activities of Acacia catechu<sup>247</sup>   –   Formulations like Mahakhadiramghritam, Madhvasava, Kanakabinduarishta, and numerous other descriptions in Kushtha Chikitsa   /Cha.Sa.[[Chikitsa_Sthana Cha.Sa.Chikitsa Sthana 7/96-97], [Cha.Sa.Chikitsa Sthana 7/100-101], [Cha.Sa.Chikitsa Sthana 7/119], [Cha.Sa.Chikitsa Sthana 7/129], [Cha.Sa.Chikitsa Sthana 7/158], [Cha.Sa.Chikitsa Sthana 7/159], [Cha.Sa.Chikitsa Sthana 7/166]      43. Pluchea lanceolata Oliver and Hiern (rasna)   vata alleviating (vatahara), potential of Pluchea lanceolata<sup>248</sup>   –   Formulations like Rasnaditaila, Bala taila, Amritadya taila, Vrishamuladi taila, Mulaka taila, Jivaniya ghrita, and other descriptions in Vatavyadhi Chikitsa as well as Vatarakta Chikitsa chapters [Cha.Sa.Chikitsa Sthana 28/122], [Cha.Sa.Chikitsa Sthana 28/136-137], [Cha.Sa.Chikitsa Sthana 29/81]      44. Emblica officinalis Gaern or Emblic Myrobalan (amalaka)   Anti-ageing / causes rejuvenation (vayasthapana), nutraceutical effects of</p> |   |  |                                |

<sup>245</sup> May, RC et al. 1996. Glucocorticoids and acidosis stimulate protein and amino acid catabolism in vivo. *Kidney Int.* 1996 Mar;49(3):679-83.

<sup>246</sup> Vaudevan et al. 2011. Textbook of biochemistry for medical students, Sixth Edition, JP Medical Publishers

<sup>247</sup> Parfitt A. 1982 The coupling of bone formation to bone resorption: a critical analysis of the concept and of its relevance to the pathogenesis of osteoporosis. *Metab Bone Dis Relat Res* 4:1-6.

<sup>248</sup> Mundy G 1989 Local factors in bone remodeling. *Rec Prog Horm Res* 45:507-531.

*Emblica officinalis*<sup>249</sup> | – | Numerous rasayana in Rasayana Chikitsa, Abhayamalakiya Rasayana Pada such as Amalaka Rasayana, Amalaki ghee, Amalaka avaleha, Amalaka powder, Amalakayasa Brahma Rasayana, Kevala Amalaka Rasayanam etc. [Cha.Sa.Chikitsa Sthana.1/1] ||| 45. Terminalia Chebula (haritaki) or Chebulic Myrobalan | Produces wholesome effect (pathya), potential of Terminalia chebula<sup>250</sup> | – | Terminalia Chebula (haritaki) is mentioned as the first rejuvenating drug (rasayana dravya) mentioned in the context of rasayana. [Cha.Sa.Chikitsa Sthana1/1] ||| 46. Root of Ricinus communis Linn (eranda) or castor oil | Increases virility and alleviating vata (vrishyavatahara), antimicrobial potential of Ricinus communis<sup>251</sup> | – | Formulations like Amritadya taila ||| 47. Root of Piper longum Linn or long pepper (pippali) | Digestive stimulant, carminative, relieves abdominal distension (Deepaniyapachaniyaanahprasamana), anti-inflammatory, analgesic, and antipyretic activities of Piper<sup>252</sup> | –||– ||| 48. Root of Plumbago zeylanica (chitraka) or white flowered lead wort | Promotes digestion, carminative action, inflammation in anal region, curing of piles, subside colic pain [Deepaniyapachaniyagudashothaarshashulaharanam] ||– | Formulations like takrarishta, pippalyadighrita, chavyadighrita, nagaradighrita used in the treatment of piles (arshachikitsa). [Cha.Sa.Chikitsa Sthana14] ||| 49. Inula racemosa (pushkaramula) or orris root | Curative of hiccups, dyspnea, pleural effusion, cough (hikka shwasa kasa parshvashulahara)<sup>253</sup> ||– | Formulations like hinguadiyavagu, dashamuladiyavagu, pushkaradiyavagu, shatyadichurna used in treatment of hiccups and dyspnea (hikka shwasa chikitsa) and forumlations like Duralabhadighrita, Jivantyadighrita and churna mentioned in Rajayakshma Chikitsa [Cha.Sa.Chikitsa Sthana 8/101-102] ||| 50. Cyperus rotundus Linn. (musta) or Nut grass | Has astringent effect, promotes digestion & carminative action (Sangrahikadeepaniyapachaniya)<sup>254</sup> | – | Digestive formulations (pachana yoga) in ama grahani [Cha.Sa.Chikitsa Sthana 15/98-99] and other formulations like Chandanadyaghrita, Nagaradyachurna, Bhunimbadyachurna, Moolasava,

<sup>249</sup> Hayward M, Fiedler-Nagy C 1987 Mechanisms of bone loss: rheumatoid arthritis, periodontal disease and osteoporosis. 22:251–254.

<sup>250</sup> Tuominen J, Impivaara O, Puukka P, Ronnenmaa T 1999 Bone mineral density in patients with type 1 and type 2 diabetes. Diabetes Care 22:1196–1200.

<sup>251</sup> Krakauer J, McKenna M, Burderer N, Rao D, Whitehouse F, Parfitt A 1995 Bone loss and bone turnover in diabetes. Diabetes 44:775–782.

<sup>252</sup> Macey L, Kana SM, Jingushi S, Terek RM, Borretos J, Bolander ME 1989 Defects of early fracture-healing in experimental diabetes. J Bone Joint Surg Am 71:722–733.

<sup>253</sup> Gebauer G, Lin S, Beam H, Vieira P, Parsons J 2002 Low-intensity pulsed ultrasound increases the fracture callus strength in diabetic BB Wistar rats but does not affect cellular proliferation. J Orthop Res 20:587–592.

<sup>254</sup> Barrett-Conner E, Holbrook T 1992 Sex differences in osteoporosis in older adults with non-insulin-dependent diabetes mellitus. JAMA 268:3333–3337.

Panchamakshara etc. described in Grahani Chikitsa, pramathya in diarrhea (atisara) [Cha.Sa.Chikitsa Sthana 19/20-22], Shadangapaniya [Cha.Sa.Chikitsa Sthana 19/50],[Cha.Sa.Chikitsa Sthana 19/52] etc. || | 51. Pavonia odorata Willd. (udichya) or fragrant Sticky mallow | Produces cooling effect (refrigerant), promoting digestion and carminative action curing vomiting and diarrhea (Nirvapanadipaniyapachaniyachhardiatisaraha), properties of Pavonia odorata<sup>255</sup> ||- | Pramathya in diarrhea (atisara) [Cha.Sa.Chikitsa Sthana 19/20-22] || | 52. Oroxylum indicum Vent. or free of heaven (shyonaka or katvanga) | Has astringent effect and digestive stimulant, (Sangrahikapachaniyadipaniyanam)<sup>256</sup> | - | - || | 53. Hemidesmus indicus R.B. or Indian sarsaparilla (ananta) | Has astringent effect, curing bleeding disorders (sangrahikaraktaptaprashtama) ||- | Bhad rashriyadigana used in Rakta pitta Chikitsa and other references like [Cha.Sa.Chikitsa Sthana 4/76], [Cha.Sa.Chikitsa Sthana 4/82], [Cha.Sa.Chikitsa Sthana 4/101] || | 54. Tinospora Cordifolia miers (guduchi/amrita) | Acts as astringent, curative of vata, promotes digestion, curative of vitiation of kapha and blood (san grahikavataharadipaniyashleshmashonitavibandhaprashamana). || Formulations like Amrutaditailam and various other references in Vatarakta Chikitsa such as [Cha.Sa.Chikitsa Sthana 29/71], [Cha.Sa.Chikitsa Sthana 29/121] etc. || | 55. Aegle Marmelos Corr or bael (bilva) | Has astringent effect, promote digestion, alleviating vata and kapha (san grahikadipaniyavatakaphaprashamana), therapeutic potential of Aegle marmelos<sup>257</sup> ||- | - || | 56. Aconitum Heterophyllum wall or atips (ativisha) | Has astringent effect, promotes digestion, carminative action and alleviates all the dosha or curative of all the disorders. (dipaniyapachaniyasangr ahikasarvadoshaharanam)<sup>258</sup> ||- | Gruel for diarrhoea [Cha.Sa.Sutra Sthana 2/22] and numerous other references in Grahani Chikitsa and Atisara chikitsa and use as medicine for children due to its effect to reduce all dosha (sarvadoshaharatva) in formulations like balachaturbhadrachurna || | 57. Pollens of Nymphaea alba Linn. (utpal), kumuda (a variety of utpal) and Nelumbo nucifera gaertn. (padma) or pollen of blue and white water lilies | Astringent effect, alleviating bleeding disorders (san grahikaraktaptaprashtama)<sup>259</sup> ||- | Used in

<sup>255</sup> Loe H 1993 Periodontal disease. The sixth complication of diabetes mellitus. Diabetes Care 16:329–334.

<sup>256</sup> Nelson R, Shlossman M, Budding L, Pettitt DJ, Saad MF, Genco RJ, Knowler WC 1990 Periodontal disease and NIDDM in Pima Indians. Diabetes Care 13:836–840.

<sup>257</sup> <https://www.slideshare.net/sprince33/glomerulonephritis> accessed on 12 June 2017

<sup>258</sup>

<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

<sup>259</sup>

<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

Raktapitta Chikitsa [Cha.Sa.Chikitsa Sthana]] 4/44], [Cha.Sa.Chikitsa Sthana. 4/67] | | | | 58. Fagonia cretica Linn. (duralabha) or cretsn prickly clover | Curative of pitta and kapha (pitta shleshmaprashamana), Medicinal significance of Fagonia cretica<sup>260</sup> | – | Drulalabhasava [Cha.Sa.Chikitsa Sthana 15/152-155] is indicated in bleeding disorders (raktapitta) and other disorders caused due to kapha. | | | 59. Callicarpa macrophylla Vahi. or the perfumed cherry (priyangu) | Alleviates the plethoric condition of blood and pitta (shonitapittatiyogaprashamana)<sup>261</sup> ||– | Callicarpa macrophylla (priyangu) is indicated as diet in treatment of bleeding disorders (Raktapitta Chikitsa) [Cha.Sa.Chikitsa Sthana 4/36] as well as a medicine in bleeding disorders (raktapitta) [Cha.Sa.Chikitsa Sthana 4/66], [Cha.Sa.Chikitsa Sthana 4/70], [Cha.Sa.Chikitsa Sthana 4/73], [Cha.Sa.Chikitsa Sthana 4/81], [Cha.Sa.Chikitsa Sthana 4/94] etc. It is included in Bhadrashriyadigana | | | | 60. Bark of Holarrhena antidyscenterica wall. or kurchi bark (kutaja) | Is an astringent and dessicant of kapha, pitta, and the blood (shlesma pitta raktasangrahikopsosananam)<sup>262</sup> | – | Formulations like Kutajadirasakriya [Cha.Sa.Chikitsa Sthana 14/188-190], picchabasti, etc. Dalhana, commenting on [Su.Sa.Chikitsa Sthana.6/13] states that Kutajaphanita is indicated in bleeding piles associated with blood and pitta (kaphapittanubandharaktajaarshas) | | | 61. Fruit of Gmelina arborea (kashmari) or fruit of white teak | Causes haemostasis and cures bleeding disorders (raktapitta) (raktasangrahikaraktaptaprasamana) | | Gmelina arborea (kashmari) is indicated as diet in treatment of bleeding disorders [Cha.Sa.Chikitsa Sthana 4/39] | | | 62. Uraria picta Desv. (prishniparni) or painted leaved uraria | Has astringent effect, alleviates vata, promotes digestion and is aphrodisiac (sangrahikavataharadipaniyavrishyanam)<sup>263</sup> | | – | | | 63. Desmodium gangeticum D.C. or tick trefoil (shalaparni / vidarigandha) | Aphrodisiac and alleviates all doshas. (Vrishyasarovadoshaharanam)<sup>264</sup> | – | – | | | 64. Sida Cordifolia Linn. or the heart leaved sida (bala) | Has astringent effect, promotes strength and curative of vata (sangrahikopshoshananam)<sup>265</sup> ||– | Formulations like Bala tailam, Amritadi tailam etc. | | | | 65. Tribulus terrestris Linn. or the small calatrops (gokshura) | Cures dysuria & vata

<sup>260</sup> Hampton T. Studies probe oral health diabetes link. JAMA 2008; 300:2471-2473.

<sup>261</sup> <http://press.endocrine.org/doi/10.1210/jcem.86.3.7304> accessed on 12 June 2017

<sup>262</sup> Goldberg J.Ira . Diabetic Dyslipidemia: Causes and Consequences .The Journal of Clinical Endocrinology & Metabolism. 2001. 86 (3): 965-971.

<sup>263</sup>

[http://doctor.ndtv.com/faq/ndtv/fid/8091/What\\_is\\_the\\_cause\\_for\\_white\\_cloudy\\_urine.html](http://doctor.ndtv.com/faq/ndtv/fid/8091/What_is_the_cause_for_white_cloudy_urine.html) accessed on 12 June 2016

<sup>264</sup> <http://ehealthforum.com/health/topic35228.html> accessed on 12 June 2016

<sup>265</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

(mutrakrichchraanilahara)<sup>266</sup> | – | Formulations like Sthiradighrita [Cha.Sa. Chikitsa Sthana 26/23] and use in dysuria caused by vata (vatikamutrakrichra) [Cha.Sa.Chikitsa Sthana 26/46] | | 66.Extract of Ferula narhex Boiss or asafoetida (hingu) | Causes excision or splits up the morbid humours, digestive stimulant, corrective of peristalsis or downward movement of vata. Alleviates vata and kapha (chedaniyadipaniyaanulomikavatakaphaprashamananam), Medicinal properties of Asafoetida<sup>267</sup>||– | Formulations like Hingvadi churna and gutika [Cha.Sa.Chikitsa Sthana 5/79-84], Hingusauvarchaladya ghrita [Cha.Sa.Chikitsa Sthana 5/69-70] etc described in treatment of abdominal lumps (Gulma Chikitsa) | | | 67. Rheum emodi wall. (amlavetasa) | Causes purgation (laxatives), digestive stimulant, corrective of peristalsis and curative of vata and kapha (bhedaniyadipaniyaanulomikavatashleshmanharanam), Therapeutic uses of Rheum emodi wall.<sup>268</sup>||– | Formulations like Hingvadichurna and gutika [Cha.Sa.Chikitsa Sthana 5/79-84], Shatyadichurna and gutika [Cha.Sa.Chikitsa Sthana 5/86-90] and references like [Cha.Sa. Chikitsa Sthana 5/162], [Cha.Sa.Chikitsa Sthana 5/166] etc described in treatment of abdominal lumps (Gulma Chikitsa) | | | 68. Barley ash (yavasukah) | Has laxative effect causing carmination, relieves piles, (stramsanapachanaaarshoghna) | – | Ingredient of Dashamooladyaghrita [Cha.Sa.Chikitsa Sthana 15/182-86], Ksharaghrita [Cha.Sa.Chikitsa Sthana 15/171-172] described in Grahani Chikitsa | | 69.Habitual use of buttermilk (takrabhyasa) | Curative effect on gastrointestinal disorders (grahani), edema, piles, and complication due to improper administration of oleation therapy (grahanidoshashophaarshoghrityapatprasaman), properties of buttermilk<sup>269</sup> ||– | Formulations like Takraishta [Cha.Sa.Chikitsa Sthana 15/120-121], [Cha.Sa.Chikitsa Sthana 14/72-75], Panchamooladyaghrita and choorna [Cha.Sa.Chikitsa Sthana 15/88-93], and references like [Cha.Sa.Chikitsa Sthana 15/115-119], [Cha.Sa.Chikitsa Sthana 14/76-88] and [Cha.Sa.Sutra Sthana 13/70-78] | | | 70.Habitual use of meat soup of carnivorous animal (kravyadmamsarasaabhyas) | Relieves gastrointestinal disorders (grahani), treatment of assimilation disorders, consumption and piles (grahanidoshashoshaarshognanam) | – | References like [Cha.Sa.Chikitsa Sthana 15/209-210], [Cha.Sa.Chikitsa Sthana 8/149-155] etc. | | | 71.Habitual use of milk & ghee (kshiraghritabhyasa) | has rejuvenation properties (vitilizer) (rasayananam) | – |

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<sup>266</sup> <https://answers.yahoo.com/question/index?qid=20100106090425AAC3og> accessed on 12 June 2016

<sup>267</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

<sup>268</sup> Zargar BA, Masoodi MH, Ahmed B, Ganie SA. Phytoconstituents and therapeutic uses of Rheum emodi wall. ex Meissn. Food Chem. 2011;128(3):585-589.  
doi:10.1016/j.foodchem.2011.03.083

<sup>269</sup> Sodini I, Morin P, Olabi A, Jiménez-Flores R. Compositional and functional properties of buttermilk: a comparison between sweet, sour, and whey buttermilk. J Dairy Sci. 2006 Feb;89(2):525-36. doi: 10.3168/jds.S0022-0302(06)72115-4. PMID: 16428621.

Milk and ghee are advised to delay aging which indicates its rejuvenative effect.  
[A.Hr.Utta Sthana 40/54] <sup>270</sup> ||| 73. Habitual gargling with sesame (tila) oil (tailagandushaabhyasa) | Promotes taste of food and strength of teeth. (dantabalaruchikaranam) || It is advised in various disease conditions like sensitivity of teeth (danta harsha), loose teeth (chala danta) where strength of the teeth are to be restored.[A.S.Sutra Sthana 31/4] ||| 74. Application of sandalwood paste | Removes foul odour and removes burning sensation of body (durgandhahardahanirvapanlepananam)<sup>271</sup>h | – | Shirishadipradeha [Cha.Sa.Sutra Sthana 3/29], [Cha.Sa.Sutra Sthana 6/31] ||| 75. Application of Pluchea lenciolata Oliver and Hiern. (rasna) or Indian groundsel and Aquilaria agallocha Roxb. (aguru) in ointment form or eagle wood | Application of these dispel coldness of body (shitapanayanpralepananam).||– | [Cha.Sa.Sutra Sthana 6/16] ||| 76. Geranium grass (Cymbopogon JivarancusaSchult) (lamajjaka) and Vetiveria Zizanioides Nash. (ushira) or cucus | Cures burning sensation skin diseases and sweating (dahatvagadoshaswedapanayan), therapeutic use of Cymbopogon citratus<sup>272</sup> | – | Shirishadipradeha [Cha.Sa.Sutra Sthana 3/29] ||| 77. Massage and poultice of Saussurea lappa C.B. Clarke (kushta) | Alleviates vata (vatahara) and useful in unction and poultices (vataharaabhyangopanahopayoginan) | – | ||| 78. Glycyrrhiza glabra Linn. or liquorice (madhuka) | Beneficial for eye, virility, hair, throat, complexion and promote pigmentation and healing (cakshushyavrishyakeshyakanthyavarnyaviranjaniya)<sup>273</sup> | – ||| 79. Fresh air (vayu) | Restores animation and consciousness (or gives life) (pranasajnapradanahetunam) | – | In a patient of coma (sanyasa), blowing , needling which helps to stimulate vayu is done to bring back the consciousness.[Cha.Sa.Sutra Sthana 24/46/47] ||| 80. Heat (agni) | Curative of indigestion (ama disorder), stiffness, chill, colic pain and shivering (ama stambhashitashulodvepanapraphashamana)||– | Fomentation using sand (valukasveda) used in Rheumatoid disorders (amavata) to alleviate stiffness, chill, pain etc. [Cakra dutta, AmavataChikitsa]<sup>274</sup> ||| 81. Water (jala) | Produces astringent effect (stambhaniyanam) || Intra nasal drug administration

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<sup>271</sup> Rajsmita B, Keshavamurthy V. Re-discovering Sandalwood: Beyond Beauty and Fragrance. Indian Dermatol Online J. 2019;10(3):296-297.  
[doi:10.4103/idoj.IDOJ\\_357\\_18](https://doi.org/10.4103/idoj.IDOJ_357_18)

<sup>272</sup> Shah G, Shri R, Panchal V, Sharma N, Singh B, Mann AS. Scientific basis for the therapeutic use of Cymbopogon citratus, staph (Lemon grass). J Adv Pharm Technol Res. 2011;2(1):3-8. [doi:10.4103/2231-4040.79796](https://doi.org/10.4103/2231-4040.79796)

<sup>273</sup> Pastorino G, Cornara L, Soares S, Rodrigues F, Oliveira MBPP. Liquorice (Glycyrrhiza glabra): A phytochemical and pharmacological review. Phytother Res. 2018;32(12):2323-2339. [doi:10.1002/ptr.6178](https://doi.org/10.1002/ptr.6178)

<sup>274</sup> Chakrapanidatta, Cakradatta (Chikitsasangraha). Edited by Priya Vrat Sharma. 3rd ed. Varanasi: Chaukhamba publishers; 2002

(nasya) of plain water is advised in bleeding disorders (rakta pitta) so as to arrest bleeding. [A.S.Sutra Sthana.29/8] <sup>275</sup> ||| 82.Water with a hot clod of earth plunged therein (mrudbhrushtaloshtanirvapitudaka) | Alleviates acute attack of thirst and vomiting (trishnachhardiatiyogaprashaman) || Water with a hot clod of earth plunged therein is advised in vomiting due to pitta (pittajachardi) [Cha.Sa.Chikitsa Sthana 20/30] and in attack of thirst due to pitta (pittajatrishna) [Cha.Sa.Chikitsa Sthana 22/45] |||||

## Classification of Agrya Dravya

The 152 entities can be better understood by categorizing them into these 6 sets.

1. Wholesome substances for both healthy and patients (swasthaturahita dravya).Eg: Food, Water, Milk, Meat, etc.
2. Wholesome actions for both healthy and patients (swasthaturahita karma).Eg: Emesis, Purgation, Enema, etc.
3. Unwholesome substances (swasthaturaahita dravya)Eg: Diospyros malabarica (tinduka), Limonia acidissima (kapithha), Ghee of sheep milk etc.
4. Food articles that are wholesome for patients (aturahita anna).Eg: Milk of goat, Milk of Buffalo, Sugarcane juice, etc.
5. Medicines that are wholesome for patients (aturahita aushadha).Eg: Randia dumetorum (madanaphala), Embelia ribes (vidanga), Pluchea lanceolata (rasna) etc.
6. A group of actions which are either wholesome or unwholesome (hita/ ahita karma)Eg: Suppression of natural urges (vega sandharanam), timely intake of food (kalabhojanam) etc.

## Pathyam (wholesomeness)

Pathyam is another term for wholesomeness (hitam). The definition of pathya encompasses both body and mind (good for the body and pleasing for the mind). The wholesomeness of a substance/activity is in terms of the final effect that it brings about in the body and not in its immediate or local effect. For example, the use of bitter medicines is not pleasing for the mind when advised in fever (jvara), but when it cures the fever (jvara), the final result becomes pleasing for the mind. Thus, while advising pathya, it is necessary to counsel the patient to ensure patient compliance. In healthy, the wholesomeness can definitely be attributed to certain articles, but in patients, the wholesomeness of a particular substance is to be evaluated against various factors like the state of the disease, season, the quantity, etc. For example, though water in moderate quantity is pathya in healthy, it is forbidden in diseases like anemia (pandu), ascites (udara), piles (arsha) etc.

## Further research area

It is required here that some researches on scientific ground to support the views and concepts of this chapter, which is very unique and practical.

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## Atreyabhadrakapyiya Adhyaya

### Sutra Sthana Chapter 26. Pharmacological principles of wholesome and unwholesome diet Abstract

The significance of wholesome (hita, pathya) and unwholesome (ahita, apathyā) foods was dealt in the previous chapter (Yajjah Purushiya). The present chapter named after Lord Atreya and a renowned sage Bhadrakapya, certain concepts and pharmacological principles explain the effects of beneficial (hita) and harmful food and substances (ahita ahara/dravyas). The discussion on “correlation between rasa (taste) and diet (ahara)” is documented here. Principles of Ayurvedic pharmacology like rasa (taste), veerya (potency), guna (quality), vipaka (metabolite) and prabhava (specific principle) are discussed to understand the mechanism of action of food and drugs. The effect can be perceived through minute observation of the physiological changes occurring after interaction in the body. Six perceived tastes, adverse effects of their excessive consumption are described. Certain food articles and their combination are incompatible to the body and lead to disease due to their antagonistic properties. These are categorized under viruddha (incompatible or antagonistic). This important concept is described to know about the possible food: drug::body interactions and their adverse effects.

**Keywords:** Pharmacology, Rasa (taste), guna(quality), veerya (energy or potency of active drug molecule), vipaka (metabolite), *prabhava* (specific principle), panchamahabhuta, therapeutic value.

## Introduction

The scope of Ayurveda was envisaged by the acharyas under three key principles: hetujnana(knowledge of etiology), lingajnana (symptomatology) and aushadhnana (knowledge of therapeutics). Etiology includes the immediate and distant causes of diseases. Symptomatology includes the signs and symptoms of diseases and health. In continuation of the series on *annapana chatushka* (tetrad on dietetics), the present chapter is on understanding the basic principles of Ayurvedic pharmacology (*aushadhnana*). *Aushadhnana* encompasses *materia medica* and therapeutics. *Dravya* (matter), *guna* (quality), *karma* (action), *samanya* (that which results in similarity), *vishesha* (that which results in exclusivity) and *samavaya* (inseparable or permanent relationship or concomitance) constitute *karana* (causes, reasons or means) for achieving good health by restoration of dhatu samyata (equilibrium of dosha, tissue elements).

*Dravyas* are of three categories - some alleviate dosha,some vitiate dhatu, and some are good for the maintenance of positive health. *Dravyas* act with the help of their inherent qualities (*guna*). *Dravya* acts by its nature or with the help of its inherent qualities. It is emphasized that no medicine should be prescribed for incurable diseases and curable conditions should be treated with *bheshaja* (medicine) possessing opposite

qualities (to those of the conditions being treated), administered with due regard to *disha* (the area or region where the drugs are produced or collected), *matra* (appropriate dose) and *kala* (seasonal variations as well as the age of the patient). The success of the treatment primarily depends on the principles involved in processing and prescribing the drugs that are collectively called *paradi guna* (10 general attributes). The key factor responsible for the manifestation of the effect of the drug is referred to as *veerya*. *Veerya* is the power that performs *karya* (work or activity). The site of action of one drug is referred as *adhikarana*, and bodily components like *dosha*, *dhatu*, *mala*, *agni*, *srotas* and mind may be considered as *adhishthanas*. *Upaya* indicates the mode of administration and the consequent outcome of the *upaya* is *phalam* (which ideally should be the restoration of equilibrium of all the functions of body and mind). About principles of drug action *rasa*, *guna*, *veerya*, *vipaka* and *prabhava* are considered to be the prime factors that trigger the drug's actions. This is referred to as *guna prabhava*(literally, effects of the qualities).

*Rasas*, or tastes, are of six types: *madhura* (sweet), *amla* (sour), *lavana* (saline), *katu* (pungent), *tikta* (bitter), and *kashaya* (astringent).

*Guna*, or qualities, are of twenty types: *guru* (heavy), *laghu* (light), *manda* (dull, slow), *tikshna* (sharp, fast), *hima* (cold), *ushna* (hot), *snigdha* (unctuous or greasy), *ruksha* (dry), *shlakshna* (smooth, slippery), *khara* (coarse), *sandra* (coagulating or solidifying), *mridu* (soft), *kathina* (hard), *sthira* (immobile, static), *sara* (movable), *sukshma* (subtle), *sthula* (grossness), *vishada* (cleansing) and *pichchila* (sticky, gluey), and *drava* (liquidity).

*Veerya* is either of two *guna* (*sheeta* and *ushna*) or eight *guna*:*guru*, *snigdha*, *hima*, *mridu*, *laghu*, *ruksha*, *ushna*, and *tikshna*.

*Vipaka* is expressed in the form of either two *guna* (*guru* and *laghu*), or three *rasas* (*madhura*, *amla*,and *katu*).

## Sanskrit text, Transliteration and English Translation

अथात आत्रेयभद्रकाप्यीयमध्यायं व्याख्यास्यामः||१||

इति ह स्माह भगवानात्रेयः||२||

athāta ātrēyabhadrakāpyīyamadhyāyam vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAta AtreyabhadrakApylyamadhyAyaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Atreyabhadrakaptyiya” (Pharmacological principles of wholesome and unwholesome diet). Thus said Lord Atreya. [1-2]

## Conference on rasa and diet

### Participants in the conference

आत्रेयो भद्रकाप्यश्च शाकुन्तेयस्तथैव च | पूर्णाक्षश्चैव मौद्गल्यो हिरण्याक्षश्च कौशिकः||३||

यः कुमारशिरा नाम भरद्वाजः स चानघः | श्रीमान् वार्योविदश्चैव राजा मतिमतां वरः||४||

निमिश्च राजा वैदेहो बडिशश्च महामतिः| काङ्कायनश्च बाह्लीको बाह्लीकभिषजां वरः||५||

एते श्रुतवयोवृद्धा जितात्मानो महर्षयः| वने चैत्ररथे रम्ये समीयुर्विजिहीर्षवः||६||

तेषां तत्रोपविष्टानामियमर्थवती कथा| बभूवार्थविदां सम्यग्रसाहारविनिश्चये||७||

ātrēyō bhadrakāpyaśca śākuntēyastathaiva ca| pūrnākṣaścaiva maudgalyō  
hiranyākṣaśca kauśikah||३||

yaḥ kumāraśirā nāma bharadvājah sa cānaghah| śrīmān vāryōvidaścaiva rājā  
matimatāṁ varah||४||

nimiśca rājā vaidēhō baḍiśaśca mahāmatih| kāṅkāyanaśca bāhlīkō bāhlīkabhiṣajāṁ  
varaḥ||५||

ētē śrutavayovṛddhā jitātmānō maharṣayah| vanē caitrarathē ramyē  
samīyurvijihīrṣavah||६||

tēśāṁ tatrōpaviṣṭānāmiyamarthavatī kathā| babhūvārthavidāṁ  
samyagrasāhāraviniścayē||७||

Atreyo bhadrakApyashca shAkunteyastathaiva ca| pUrNAkShashcaiva maudgalyo  
hiraNyAkShashca kaushikaH||३||

yaH kumArashirA nAma bharadvAjaH sa cAnaghah| shrImAn vAryovidashcaiva rAjA  
matimatAM varah||४||

nimishca rAjA vaideho baDishashca mahAmatiH| kA~gkAyanashca bAhllko  
bAhllkabhiShajAM varah||५||

ete shrutavayovRuddhA jitAtmAno maharShayaH| vane caitrarathe ramye  
samlyurvijihIrlShavaH||६||

teShAM tatropaviShTAnAmiyamarthavatI kathA| babhUvArthavidAM  
samyagrasAhAravinishcaye||७||

Once Atreya, Bhadrakanya (descendant of Shakunta), Purnakshasha (descendant of Mudgala), Hiranyaksha (the descendant of Kushika), Kumarashira, Bharadwaja, the pious one, Varyovida, the king and the excellent among the wise, Nimi, the king of Videha; Badisha, the great scholar; Kankayana Bahlika, the excellent among the physicians of Bahlika – these great sages, advanced in scholarship, age and self-control- went to the beautiful forest of Chaitraratha on a pleasure trip. While sitting there, they engaged in a historic dialogue on the correlation between *rasa* and diet. [3-7]

### *Discussion on rasa*

एक एव रस इत्युवाच भद्रकाप्यः, यं पञ्चानामिन्द्रियार्थानामन्यतमं जिह्वावैषयिकं भावमाचक्षते कशलाः, स पनरुदकादनन्य इति| द्वौ रसाविति शाकन्तेयो ब्राह्मणः, छेदनीय उपशमनीयश्चेति| त्रयो रेसा इति पणोक्षो मौदूगल्यः, छेदनीयोपशमनीयसाधारणा इति| चत्वारो रसा इति हिरण्याक्षः कौशिकः, स्वादुर्हितश्च स्वादुरहितश्चास्वादुर्हितश्चास्वादुरहितश्चेति| पञ्च रसा इति कुमारशिरा भरद्वाजः, भौमौदकाग्नेयवायव्यान्तरिक्षाः| षड्रसा इति वार्योविदो राजर्षिः, गुरुलघशीतौष्णस्निग्धरुक्षाः| सप्त रसा इति निमिर्वैदेहः, मधुराम्ललवणकटुतिकतकषायक्षाराः| अष्टो रसा इति बडिशोधामार्गवः, मधुराम्ललवणकटुतिकतकषायक्षाराव्यक्ताः| अपरिसङ्ख्येया रसा इति काङ्कायनो बाह्लीकभिषक्, आश्रयगुणकर्मसंस्वादविशेषाणामपरिसङ्ख्येयत्वात्॥८॥

ēka ēva rasa ityuvāca bhadrakāpyah, yaṁ pañcānāmindriyārthānāmanyatamam  
jihvāvaiśayikam bhāvamācakṣatē kuśalāḥ, sa punarudakādananya iti] dvau rasāviti  
śākuntēyō brāhmaṇah, chēdanīya upaśamanīyaścēti] trayō rasā iti pūrṇākṣō  
maudgalyah, chēdanīyōpaśamanīyasādhāraṇā iti] catvārō rasā iti hiraṇyākṣah  
kauśikah, svādurhitaśca svādurahitaścāsvādurhitaścāsvādurahitaścēti] pañca rasā iti  
kumāraśirā bharadvājah, bhaumaudakāgnēyavāyavyāntarikṣāḥ| śādrasā iti vāryōvidō  
rājarśih, gurulaghuśītōṣṇasnidhārūkṣāḥ| sapta rasā iti nimirvaidēhah,  
madhurāmlalavaṇakaṭutiktakāṣayakṣārāḥ| aṣṭau rasā iti baḍisō dhāmārgavaḥ,  
madhurāmlalavaṇakaṭutiktakāṣayakṣārāvyaktāḥ| aparisaṅkhyēyā rasā iti kāñkāyanō  
bāhlīkabhiṣak, āśrayaguṇakarmasāṁsvādaviśēśāñāmaparisaṅkhyēyatvāt||8||

eka eva rasa ityuvAca bhadrakApyaH, yaM pa~jcAnAmindriyArthAnAmanyatamaM  
jihvAvaiShayikaM bhAvamAcakShate kushalAH, sa punarudakAdananya iti] dvau  
rasAviti shAkunteyo brAhmaNaH, chedanlyu upashamanlyashceti] trayo rasA iti  
pUrNAkSho maudgalyaH, chedanlyopashamanlyasAdhAraNA iti] catvAro rasA iti  
hiraNyAkShaH kaushikaH, svAdurhitashca  
svAdurahitashcAsvAdurhitashcAsvAdurahitashceti] pa~jca rasA iti kumArashirA  
bharadvAjaH, bhaumaudakAgneyavAyavyAntarikShAH| ShaDrasA iti vAryovidō<sup>r</sup>AjarShiH, gurulaghushItoShNasnidhārUkShAH| sapta rasA iti nimirvaidēhah,  
madhurAmlalavaNakaTutiktakashAyakShArAH| aShTau rasA iti baDisho  
dhAmArgavaH, madhurAmlalavaNakaTutiktakashAyakShArAvyaktAH|  
aparisa~gkhyeyA rasA iti kA~gkAyano bAhllkabhiShak,  
AshrayaguNakarmaMsAdivasheShANAmparisa~gkhyeyatvAt||8||

“There is only one *rasa*”, said Bhadrakapya, “which is one of the five sense objects, being the object of gustatory organ, and not different from water”. “Two *rasas*”, said the brahmana descendant of Shakunta, “and these are eliminating and pacifying”. “Three *rasas*”, said Purnakaksha, the descendant of Mudgala, “such as eliminating, pacifying and general (having both properties)”. “Four *rasas*” said Hiranyaksha, the descendant of Kushika, “such as palatable wholesome, palatable unwholesome, impalatable wholesome and impalatable unwholesome.” “Five *rasas*”, said Kumarashira Bharadwaja, “such as derived from the five basic elements- prithvi, jala, agni, vayu and akasha. “Six *rasas*”, said Vayorvida, the king sage, “such as heavy, light, cold, hot, unctuous and rough”. “Seven *rasas*”, said Nimi, (the king) of Videha, “such as sweet, sour, saline, pungent, bitter, astringent and alkaline”. “Eight *rasas*”, said Badisha,

belonging to the clan of Dhamargava, “such as sweet, sour, saline, pungent bitter, astringent, alkaline and unmanifested”. “Rasas are innumerable”, said Kankayana, the physician of Bahlika, “because factors like substratum (substance), property, action and taste are innumerable”. [8]

### *Conclusion by Lord Atreya*

षडेव रसा इत्युवाच भगवानात्रेयः पुनर्वसुः, मधुराम्ललवणकटुतिकतकषायाः। तेषां षण्णां रसानां योनिरुदकं, छेदनोपशमने द्वे कर्मणी, तयोर्मिश्रीभावात् साधारणत्वं, स्वादवस्वादुता भक्तिः, हिताहितौ प्रभावौ, पञ्चमहाभूतविकारास्त्वाश्रयाः प्रकृतिविकृतिविचारदेशकालवशाः, तेष्वाश्रयेषु द्रव्यसञ्जकेषु गुणा गुरुलघुशीतोष्णस्तिनग्धरुक्षाद्याः; क्षरणात् क्षारः, नासौ रसः द्रव्यं तदनेकरससमुत्पन्नमनेकरस कटुकलवणभूयिष्ठमनेकेन्द्रियार्थसमन्वितं करणाभिनिर्वतम्; अव्यक्तीभावस्तु खलु रसानां प्रकृतौ अवत्यनुरसेऽनुरससमन्विते वा द्रव्ये; अपरिसङ्ख्येयत्वं पुनस्तेषामाश्रयादीनां भावानां विशेषापरिसङ्ख्येयत्वान्न युक्तम्, एकैकोऽपि हयेषामाश्रयादीनां भावानां विशेषानाश्रयते विशेषापरिसङ्ख्येयत्वात्, न च तस्मादन्यत्वमपपद्यते; परस्परसंसृष्टभूयिष्ठत्वान्न चैषामभिनिर्वतेर्गुणप्रकृतीनामपरिसङ्ख्येयत्वं भैवति; तस्मान्न संसृष्टाना रसानां कर्मोपदिशन्ति बुद्धिमन्तः। तच्चैव कारणमपेक्षमाणाः षण्णां रसानां परस्परणाससृष्टानां लक्षणपृथक्त्वमुपदेक्ष्यामः॥९॥

śaḍēva rasā ityuvāca bhagavānātrēyah punarvasuh,  
madhurāmlalavaṇakaṭutiktakaṣāyāḥ| tēṣāṁ ṣaṇñāṁ rasānāṁ yōnirudakam,  
chēdanōpaśamanē dvē karmaṇī, tayōrmiśrībhāvāt sādhāraṇatvam svādvasvādutā  
bhaktiḥ , hitāhitau prabhāvau, pañcamahābhūtavikārāstvāśrayāḥ  
prakṛtivikṛtivicāradēśakālavaśāḥ, tēṣvāśrayēṣu dravyasañjñakēṣu guṇā  
gurulaghushītōṣṇasnidhārūkṣādyāḥ; kṣaraṇāt kṣārah, nāsau rasah dravyam  
tadanēkarasasamutpannamanēkarasam  
kaṭukalavaṇabhūyisṭhamanēkēndriyārthaśamanvitam karaṇābhiniṇvṛttam;  
avyaktibhāvastu khalu rasānāṁ prakṛtau bhavatyanurasē'nurasasamanvitē vā dravyē;  
aparisaṅkhyēyatvam punastēṣāmāśrayādīnāṁ bhāvānāṁ viśēṣāparisaṅkhyēyatvānna  
yuktam, ēkaikō'pi hyēśāmāśrayādīnāṁ bhāvānāṁ viśēṣānāśrayatē  
viśēṣāparisaṅkhyēyatvāt, na ca tasmādanyatvamupapadyatē;  
parasparasamṛṣṭabhūyisṭhatvānna  
caiṣāmabhinivṛttērguṇaprakṛtīnāmaparisaṅkhyēyatvam bhavati; tasmānna  
saṁṛṣṭānāṁ rasānāṁ karmōpadiśanti buddhimantah| taccaiva kāraṇamapēkṣamāṇāḥ  
ṣaṇñāṁ rasānāṁ parasparēṇāsaṁṛṣṭānāṁ lakṣaṇapṛthaktvamupadēkṣyāmāḥ||९||

ShaDeva rasA ityuvAca bhagavAnAtreyaH punarvasuH,  
madhurAmlalavaNakaTutiktakaShAyAH| teShAM [1] ShaNNAM rasAnAM yonirudakaM,  
chedanopashamane dve karmaNI, tayormishrlbhAvAt sAdhAraNatvaM, svAdvasvAdutA  
bhaktiH [2] , hitAhitau prabhAvau,pa~jcamahAbhUtavikArAstvAshrayAH  
prakRutivikRutivicAradeshakAlavashAH, teShvAshrayeShu dravyasa<sub>jjake</sub>Shu  
guNAgurulaghushItoShNasnigdharUkShAdyAH; kSharaNAt kShAraH, nAsau rasaH  
dravyaM  
tadanekarasasamutpannamanekarasaMkaTukalavaNabhUyiShThamanekendriyArthasa  
manvitaM karaNAbhinirvRuttam; avyaktlbhAvastu [3] khalu rasAnAM prakRutau  
bhavatyanurase~anurasasamanvitevA dravye; aparisa~gkhyeyatvam

punasteShAmAshrayAdInAM bhAvAnAM visheShAparisa~gkhyeyatvAnna yuktam,  
 ekaiko~api hyeShAmAshrayAdInAM bhAvAnAMvisheShAnAshrayate  
 visheShAparisa~gkhyeyatvAt, na ca tasmAdanyatvamupapadyate;  
 parasparasaMsRuShTabhUyiShThatvAnnacaiShAmabhiniryRutterguNaprakRutInAmap  
 arisa~gkhyeyatvAM bhavati; tasmAnna saMsRuShTAnAM rasAnAM karmopadishanti  
 buddhimantaH| taccaiva kAraNamapekShamANAH ShaNNAM rasAnAM  
 parasparesNAsaMsRuShTAnAM lakShaNapRuthaktvamupadekShyAmaH||9||

(After this) Lord Punarvasu Atreya said, “*Rasas* are only six: *madhura* (sweet), *amla* (sour), *lavana* (saline), *katu* (pungent), *tikta* (bitter) and *kashaya* (astringent). Their primordial source is water. Elimination and pacification the two actions, in moderate both being mixed up. Palatability or otherwise are subjective likings. Wholesome and unwholesome are effects. The products of five mahabhuta (prithvi, jala, agni, vayu and akasha) are actually the substratum of *rasas* dependent on the natural composition, products, preparation, place and time. Heavy, light, cold, hot, unctuous, rough, etc. are the properties residing in those substrata known as *dravya* (substance or drug). *Kshara* is called such because of *ksharana* (having been poured out or having corrosive action). It is not a *rasa*, but a *dravya* (substance) having been derived from many *rasas* and having the amalgamations of many *rasas* - predominantly *katu* (pungent) and *lavana* (saline) - and produced by a particular method of preparation. Unmanifestedness is there in primordial source of *rasa*, *anurasa* (secondary *rasa*) and in the substance having *anurasa*. Countlessness of *rasas* because of countlessness of factors like substratum etc. is not a convincing hypothesis because even a single *rasa* is attached to innumerable factors like substratum etc. and yet it does not forego its identity. Even in cases of combinations of *rasas*, there is no innumerableness of its primordial source, natural properties and actions. That is why the intelligent ones do not describe the action of the combined *rasas*. Based on this fact, (I) will describe the characters of uncombined six *rasas* separately.” [9]

## Panchamahabhuta

### *The Five Elements, their properties and actions*

अग्रे तु तावद्द्रव्यभेदमभिप्रेत्य किञ्चिदभिधास्यामः। सर्व द्रव्यं पाञ्चभौतिकमस्मिन्नर्थं;  
 तच्चेतनावदचेतनं च, तस्य गुणाः शब्दादयो गुर्वादयश्च द्रवान्ताः, कर्म पञ्चविधमुक्तं वमनादि॥१०॥

agre tu tāvaddravyabhēdamabhiprētya kiñcidabhidhāsyāmaḥ| sarvam dravyam  
 pāñcabhautikamasminnarthē ; taccētanāvadacētanam ca, tasya guṇāḥ śabdādayo  
 gurvādayaśca dravāntāḥ, karma pañcavidhamuktam vamanādi॥10॥

agre tu tAvaddravyabhēdamabhipretya ki~jcidabhidhAsyAmaH| sarvaM dravyaM  
 pA~jcabhautikamasminnarthe [1] ; taccetanAvadacetanaM ca, tasya guNAH  
 shabdAdayo gurvAdayashca dravAntAH, karma pa~jcavidhamuktaMvamanAdi॥10॥

“First of all, I will tell something about the drugs. In this context, a drug constitutes of five bhutas: prithvi, apa, tejas, vayu and akasha. It is (of two types) sentient and insentient.

Its properties are *shabda* etc. and those from *guru* to *drava*, and its action are said to be five-fold-vamana etc". [10]

#### *Properties and actions of panchamahabhuta*

तत्रद्रव्याणिगुरुखरकठिनमन्दस्थिरविशदसान्त्रस्थूलगन्धंगुणबहुलानि पार्थिवानि,  
तान्युपचयसङ्घातगौरवस्थैर्यकराणि;  
द्रवस्त्विन्दशीतमन्दमृदुपिच्छिलरसगुणबहुलान्याप्यानि,  
तान्युपक्लेदस्नेहबन्धोविष्यन्दमार्दवप्रहलादकराणि;  
उष्णतीक्ष्णसूक्ष्मलघुरुक्षविशदरूपगुणबहुलान्याग्नेयानि, तानि दाहपाकप्रभाप्रकाशवर्णकराणि;  
लघुशीतरुक्षखरविशदसूक्ष्मस्पर्शगुणबहुलानि वायव्यानि, तानि रौक्ष्यग्लानिविचारवैशद्यलाघवकराणि;  
मृदुलघुसूक्ष्मश्लक्षणशब्दगुणबहुलान्याकाशात्मकानि, तानि मार्दवसौषिर्यलाघवकराणि||११||

tatra dravyāṇī gurukharakaṭhinamandasthiraviśadasāndrasthūlagandhaguṇabahulāni  
pārthivāni, tānyupacayasaṅghātagauravasthairyakarāṇī;  
dravasnigdhaśītamandamṛdupicchilarasaguṇabahulānyāpyāni,  
tānyupaklēdasnēhabandhaviṣyandamārdavaprahlādakarāṇī;  
uṣṇatīkṣṇasūkṣmalaghurūkṣavīśadarūpaguṇabahulānyāgnēyāni,  
tānidāhapākaprabhāprakāśavarṇakarāṇī; laghuśītarūkṣakharaviśadasūkṣmasparśaguṇa  
bahulāni vāyavyāni, tāni raukṣyaglānivicāravaiśadyalāghavakarāṇī;  
mṛdulaghushūkṣmaślakṣṇaśabdaguṇabahulānyākāśātmakāni, tāni  
mārdavasauśiryalāghavakarāṇī||11||

tatra dravyANi

gurukharakaThinamandasthiravishadasAndrasthUlagandhaguNabahulAni pArthivAni [1]

,  
tAnyupacayasa~ghhAtagauravasthairyakarANi;dravasnigdhashItamandamRudupicchila  
rasaguNabahulAnyApyAni,  
tAnyupakledasnehabandhaviShyandamArdavaprahlAdakarANi;uShNatIkShNasUkShm  
alaghurUkShavishadarUpaguNabahulAnyAgneyAni, tAni  
dAhpAkprabhAprakAshavarNakarANi;laghushItarUkShakharavishadasUkShmaspars  
haguNabahulAni vAyavyAni, tAni  
raukShyaglAnivicAravaishadyalAghavakarANi;mRudulaghushUkShmashlakShNashabda  
guNabahulAnyAkAshAtmakAni, tAni mArdavasauShiryalAghavakarANi||11||

*Dravyas* (drugs) which have properties of *guru* (heavy), *khara* (coarse), *kathina* (hard), *manda* (slow), *sthira* (stable), *vishada* (non-slimy), *sandra* (solid), *sthula* (gross) possess the predominant *gandha guna* of *parthiva* (i.e., primarily made up of prithvi mahabhuta) exert actions like *upachaya* (development), *sanghata* (compactness), *gaurava* (heaviness) and *sthairyā* (firmness).

Those having properties of *drava* (liquid), *snigdha* (unctuous), *sheeta* (cold), *manda* (slow), *mridu* (soft), *pichchila* (slimy) and the predominant *rasa* is *apya* (i.e., constituting

primarily of jala mahabhuta) exert actions like *upakleda* (moistening), *sneha* (unction), *bandha* (binding), *vishyanda* (oozing), *mardava* (softening) and *pralhad* (exhilaration).

*Dravyas* with properties of *ushna* (hot), *tikshna* (sharp), *sukshma* (minute), *laghu* (light), *ruksha* (rough), *vishada* (non-slimy) and predominant *rupa* is *agneya* (i.e., constituting primarily of *agni* (*agni* mahabhuta)) produce *daha* (burning/heat), *paka* (digestion), *prabha* (luster), *prakash* (light) and *varna* (complexion).

*Dravyas* having properties of *laghu* (light), *sheeta* (cold), *ruksha* (rough), *khara* (coarse), *vishada* (non-slimy), *sukshma* (minute) and the predominant *sparsha* is *vayavya* (i.e., primarily made up of *vayu* mahabhuta). They produce actions of *ravukshya* (roughness), *glini* (depression), *vichara* (movement), *vaishdya* (non-sliminess) and *laghava* (lightness).

*Dravyas* having predominance in the properties of *mridu* (soft), *laghu* (light), *sukshma* (minute), *shlakshna* (smooth) and the predominantly *shabda* are *akashiya* (constituted predominantly of *akasha* mahabhuta). They exert actions of softening, hollowing and making light. [11]

#### *Existence of panchamahabhuta in universe*

अनेनोपदेशेन नानौषधिभूतं जगति किञ्चिद्द्रव्यमुपलभ्यते  
तां तां युक्तिमर्थं च तं तमभिप्रेत्या॥१२॥

anēnōpadēśēna nānauṣadhibhūtarām jagati kiñciddravyamupalabhyatē tārām tārām  
yuktimarthaṁ ca tam tamabhiprētya॥12॥

anenopadeshena nAnauShadhibhUtAM jagati ki~jciddravyamupalabhyate tAM tAM  
yuktimarthaM ca taM tamabhipretya॥12॥

On this basis, there is no substance in the universe which cannot be used as a medicinal drug, on the condition that they are used with rational method and with a definite objective. [12]

#### Description of drug action

न तु केवलं गुणप्रभावादेव द्रव्याणि कार्मुकाणि भवन्ति; द्रव्याणि हि  
द्रव्यप्रभावाद्गुणप्रभावाद्द्रव्यगुणप्रभावाच्च तस्मिंस्तस्मिन् काले ततदधिकरणमासाद्य तां तां च  
युक्तिमर्थं च तं तमभिप्रेत्य यत् कुर्वन्ति, तत् कर्म; येन कर्वन्ति, तदवीर्यं; यत्र कर्वन्ति, तदधिकरणं;  
यदा कुर्वन्ति, स कालः; यथा कुर्वन्ति, स उपायः; यत् साध्यन्ति, तत् फलम्॥१३॥

na tu kēvalam̄ guṇaprabhāvādēva dravyāṇi kārmukāṇi bhavanti; dravyāṇi hi  
dravyaprabhāvādgūṇaprabhāvāddravyaguṇaprabhāvācca tasmiṁstasmin kālē  
tattadadhikaraṇamāsādyā tārām tārām ca yuktimarthaṁ ca tam tamabhiprētya yat kurvanti,  
tat karma; yēna kurvinti, tadvīryaṁ; yatra kurvanti, tadaadhikaraṇaṁ; yadā kurvanti, sa  
kālah; yathā kurvanti, sa upāyah; yat sādhayanti, tat phalam॥13॥

na tu kevalaM guNaprabhAvAdeva dravyANI kArmukANI bhavanti; dravyANI hi dravyaprabhAvAdguNaprabhAvAddravyaguNaprabhAvAcca tasmiMstasmin kAletattadadhikaraNamAsAdya tAM tAM ca yuktimarthaM ca taM tamabhipretya yat kurvanti, tat karma; yena kurvinti, tadvIryAM; yatra kurvanti, tadaradadhikaraNaM; yadAkurvanti, sa kAlaH; yathA kurvanti, sa upAyaH; yat sAdhayanti, tat phalam||13||

The activity of drugs is not due to its properties only, but their own intrinsic composition, properties and both combined together in particular time, on reaching a particular locus, with a particular mechanism and objective are also involved in the mode of action of drug. What they perform is *karma* (action), by means of which they act is *veerya* (potency), where they act is *adhikarana* (locus of action), when they act is *kala* (time), how they act is *upaya* (mechanism) and what they achieve is *phalam* (result). [13]

### Description of the concept of rasa

#### Combinations of rasa

भेदश्चैषां त्रिषष्टिविधविकल्पो द्रव्यदेशकालप्रभावाद्भवति, तमुपदेक्ष्यामः||१४||

bhedaścaiṣāṁ triṣṭividhavikalpō dravyadēśakālaprabhāvādbhavati,  
tamupadēkṣyāmahi||14||

bhedashcaiShAM triShaShTividhavikalpo dravyadeshakAlaprabhAvAdbhavati,  
tamupadekShyAmaH||14||

There are sixty-three types of variations of *rasas* according to substance, place and time, that is mentioned in the following verses. [14]

स्वादुरम्लादिभिर्योगं शेषैरम्लादयः पृथक्| यान्ति पञ्चदशैतानि द्रव्याणि द्विरसानि तु||१५||

पृथगम्लादियुक्तस्य योगः शेषैः पृथग्भवेत्| मधुरस्य तथाऽम्लस्य लवणस्य कटोस्तथा||१६||

त्रिरसानि यथासङ्ख्ययुक्तानि विंशतिः| वक्ष्यन्ते तु चतुष्केण द्रव्याणि दश पञ्च च||१७||

स्वादवम्लौ सहितौ योगं लवणादयैः पृथग्गतौ| योगं शेषैः पृथग्यातश्चतुष्करससङ्खयया||१८||

सहितौ स्वादुलवणौ तद्वत् कट्वादिभिः पृथक्| युक्तौ शेषैः पृथग्योगं यातः स्वादूषणौ तथा||१९||

कट्वाद्यैरम्ललवणौ संयुक्तौ सहितौ पृथक्| यातः शेषैः पृथग्योगं शेषैरम्लकटू तथा||२०||

युज्यते तु कषायेण सतिक्तौ लवणोषणौ||२१| षट् तु पञ्चरसान्याहुरेकैकस्यापवर्जनात्||२१||

षट् चैवैकरसानि स्युरेकं षड्समेव तु||२२| इति त्रिषष्टिद्रव्याणां निर्दिष्टा रससङ्खयया||२२||

svāduramlādibhīryogaṁ śeṣairamlādayaḥ pṛthak| yānti pañcadaśaitāni dravyāṇi dvirāsāni tu||15||

pṛthagamlādiyuktasya yogaḥ śeṣaiḥ pṛthagbhavēt| madhurasya tathā'mlasya lavaṇasya katōstathā||16||

trirasāni yathāsaṅkhyam dravyāṇyuktāni virṁśatih| vaksyantē tu catuskēṇa dravyāṇi  
daśa pañca ca||17||

svādvamlau sahitau yōgarṁ lavaṇādyaiḥ pṛthaggaṭau| yōgarṁ śēśaiḥ  
pṛthagyātaścatuṣkarasasaṅkhyayā||18||

sahitau svādulavaṇau tadvat kaṭvādibhiḥ pṛthak| yuktau śēśaiḥ pṛthagyōgam yātah  
svādūṣaṇau tathā||19||

kaṭvādyairamlalavaṇau samyuktau sahitau pṛthak| yātah śēśaiḥ pṛthagyōgam  
śēśairamlakaṭū tathā||20||

yujyatē tu kaṣāyēṇa satiktau lavaṇoṣaṇau| ṣaṭ tu  
pañcarasānyāhurēkaikasyāpavarjanāt||21||

ṣaṭ tu pañcarasānyāhurēkaikasyāpavarjanāt| iti triṣaṣṭīdravyāṇāṁ nirdiṣṭā  
rasasaṅkhyayā||22||

svAduramIAdibhiryogaM sheShairamIAdayaH pRuthak| yAnti pa~jcadashaitAni  
dravyANi dvirasAni tu||15||

pRuthagamIAdiyuktasya yogaH sheShaiH pRuthaghavet| madhurasya tathA~amlasya  
lavaNasya kaTostathA||16||

trirasAni yathAsa~gkhyam dravyANyuktAni viMshatiH||17| vakShyante [2] tu  
catuShkeNa dravyANi dasha pa~jca ca||17||

svAdvamlau sahitau yogaM lavaNAdyaiH pRuthaggatau| yogaM sheShaiH  
pRuthagyAtashcatuShkarasasa~gkhyayA||18||

sahitau svAdulavaNau tadvat kaTvAdibhiH pRuthak| yuktau sheShaiH pRuthagyogaM  
yAtaH svAdUShaNau tathA||19||

kaTvAdyairamlalavaNau saMyuktau sahitau pRuthak| yAtaH sheShaiH pRuthagyogaM  
sheShairamlakaTU tathA||20||

yujyate tu kaShAyeNa satiktau lavaNoShaNau||21| ShaT tu  
pa~jcarasAnyAhurekaikasyApavarjanAt||21||

ShaT caivaikarasAni syurekaM ShaDrasameva tu||22|

Combination of two *rasas* such as sweet with sour etc. and sour with others, lead to creation of fifteen combinations.

Likewise, combination of three *rasas* together result in twenty substances. There are fifteen combinations of four *rasas* together. They are formed as follows: The group of sweet and sour tastes, combines with any two of remaining tastes beginning with salt in six different ways. They this form the ‘group of fours’ of tastes.

Thereafter, the group of two-sweet and salt combining consecutively with pungent, bitter and astringent, form with the addition of sour, astringent and pungent respectively, three separate ‘group of fours’.

Thereafter the group of twos of sweet and pungent combining with residuary group of two of bitter and astringent tastes, forms ‘group of fours’. Thus with the sweet taste as a constant factor, there are ten distinct groups ‘four tastes’.

Now, dropping the sweet taste, the group of two of sour and salt combining consecutively with pungent, sour and astringent tastes forms with the addition respectively of bitter, astringent and pungent tastes, three separate groups of ‘four tastes’. (1) sour-salt-pungent-bitter (2) sour-salt-bitter-astringent (3) sour-salt-astringent-pungent.

Now, dropping the salt taste, the group of two of sour and salt combine with the residuary two groups of bitter and astringent to form one fresh group of four tastes.

Finally, dropping both sweet and sour tastes, salt and pungent combine with astringent and bitter to form the fifteenth and the last group of four tastes.

By dropping from the total complex of tastes one taste at a time, there are formed six groups of quinary tastes. Then there are six groups of single tastes and the single group of six tastes. [15-22]

त्रिषष्टिः स्यात्वसङ्ख्येया रसानुरसकल्पनात् | रसास्तरतमाभ्यां तां सङ्ख्यामतिपतन्ति हि॥२३॥

triṣaṭṭih syāttvasaṅkhyēyā rasānurasakalpanāt | rasāstaratamābhyaṁ tāṁ saṅkhyāmatipatanti hi॥२३॥

iti triShaShTirdravyANAM nirdiShTA rasasa~gkhyayA॥२२॥

triShaShTiH syAttvasa~gkhyeyA rasAnurasakalpanAt [3] | rasAstaratamAbhyAM [4]  
tAM sa~gkhyAmatipatanti hi॥२३॥

The count of 63 (combinations of *rasa*) becomes countless when factoring in the *anurasas* and innumerable variations of *rasas*. [23]

संयोगः सप्तपञ्चाशत् कल्पना तु त्रिषष्टिधा| रसानां तत्र योग्यत्वात् कल्पिता रसचिन्तकैः॥२४॥

samyoḡāḥ saptapañcāśat kalpanā tu triṣaṭṭidhāḥ| rasānāṁ tatra yōgyatvāt kalpitā rasacintakaiḥ॥२४॥

saMyogAH saptapa~jcAshat kalpanA tu triShaShTidhA| rasAnAM tatra yogyatvAt [1]  
kalpitA rasacintakaiH॥२४॥

Thus, the scholars of *rasa*, have mentioned fifty-seven combinations and sixty-three forms of *rasas* (after adding six pure forms of *rasas* in fifty-seven combinations) on the basis of their applicability. [24]

कवचिदेको रसः कल्प्यः संयुक्ताश्च रसाः क्वचित् दोषौषधादीन् सञ्जिन्त्य भिषजा  
सिद्धिमिच्छता॥२५॥

द्रव्याणि द्विरसादीनि संयुक्तांश्च रसान् बुधाः। रसानेकैकशो वाऽपि कल्पयन्ति गदान् प्रति॥२६॥

kvacidēkō rasaḥ kalpyaḥ saṃyuktāśca rasāḥ kvacit| dōṣauṣadhādīn sañcintya bhiṣajā  
siddhimicchatā॥२५॥

dravyāṇi dvirasaḍīni saṃyuktāṁśca rasān budhāḥ| rasānēkaikaśō vā'pi kalpayanti  
gadān pratī॥२६॥

kvacideko rasaH kalpyaH saMyuktAshca rasAH kvacit| doShauShadhAdIn sa~jcintya  
bhiShajA siddhimicchatA॥२५॥

dravyANi dvirasaAdIni saMyuktAMshca rasAn budhAH| rasAnekaikasho vA~api  
kalpayanti gadAn pratī॥२६॥

The physician, desirous of success, should administer *rasas*, in pure forms or in combinations based on dosha, drugs etc. In diseases, the wise physicians administer drugs made up of combinations of two or more *rasas* etc., and also the combined or single *rasa* separately (as required). [25-26]

यः स्याद्रसविकल्पजः स्याच्च दोषविकल्पवित् न स मुह्येद्विकाराणां हेतुलिङ्गोपशान्तिषु ॥२७॥

yah syādrasavikalpajñah syācca dōṣavikalpavit| na sa muhyēdvikārāṇāṁ  
hētuliṅgōpāśāntiṣu ॥२७॥

yaH syAdrasavikalpaj~jaH syAcca doShavikalpavit| na sa muhyedvikArANAM  
hetuli~ggopashAntiShu [1] ॥२७॥

One, who is conversant with the variations of *rasas* and dosha, does not confuse in diagnosing the cause and symptoms of the disease and decide the course of treatment of diseases. [27]

व्यक्तः शुष्कस्य चादौ च रसो द्रव्यस्य लक्ष्यते। विपर्ययेणानुरसो रसो नास्ति हि सप्तमः॥२८॥

vyaktaḥ śuṣkasya cādau ca rasō dravyasya lakṣyatē| viparyayēṇānurasō rasō nāsti hi  
saptamah॥२८॥

vyaktaH shuShkasya cAdau ca raso dravyasya lakShyate| viparyayeNAnuraso raso  
nAsti hi saptamaH॥२८॥

*Rasa* is that which is perceived at first in dry form (of the substance). The contrary (perceived afterwards and drug in wet form) is known as *anurasa* (subsidiary taste). There is no seventh *rasa* (as unmanifested one). [28]

### *Guna (properties)*

परापरत्वे युक्तिश्च सङ्ख्या संयोग एव च। विभागश्च पृथक्त्वं च परिमाणमथापि च॥२९॥

संस्कारोऽभ्यास इत्येते गुणा ज्ञेयाः परादयः। सिद्ध्युपायाश्चिकित्साया लक्षणैस्तान् प्रचक्षमहे॥३०॥

देशकालवयोमानपाकवीर्यरसादिषु। परापरत्वे, युक्तिश्च योजना या तु युज्यते॥३१॥

सङ्ख्या स्याद् गणितं, योगः सह संयोग उच्यते। द्रव्याणां द्वन्द्वसर्वकर्मजोऽनित्य एव च॥३२॥

विभागस्तु विभक्तिः स्याद् वियोगो भागशो ग्रहः। पृथक्त्वं स्यादसंयोगो वैलक्षण्यमनेकता॥३३॥

परिमाणं पुनर्मानं, संस्कारः करणं मतम्। भावाभ्यसनमध्यासः शीलनं सततक्रिया॥३४॥

इति स्वलक्षणैरुक्ता गुणाः सर्वे परादयः। चिकित्सा यैरविदितैर्न यथावत् प्रवर्तते॥३५॥

parāparatvē yuktiśca saṅkhyā saṁyōga ēva ca| vibhāgaśca pṛthaktvam ca  
parimāṇamathāpi ca||29||

saṁskārō'bhyāsa ityētē guṇā jñeyāḥ parādayah| siddhyupāyāścikitsāyā lakṣaṇaistān  
pracakṣmahē॥30॥

dēśakālavayōmānapākavīryarasādiṣu| parāparatvē, yuktiśca yōjanā yā tu yujyatē॥31॥

saṅkhyā syādganitam, yogaḥ saha saṁyōga ucyatē| dravyānāṁ  
dvandvasarvaikakarmajō'nitya ēva ca||32||

vibhāgastu vibhaktih syādviyōgō bhāgaśō grahah| pṛthaktvam syādasarṇyōgō  
vailakṣaṇyamanēkatā॥33॥

parimāṇam punarmānam, saṁskāraḥ karaṇam matam| bhāvābhyanamabhyāsaḥ  
śīlanam satatakrīyā॥34॥

iti svalakṣaṇairuktā guṇāḥ sarvē parādayah| cikitsā yairaviditairna yathāvat  
pravartatē॥35॥

parAparatve yuktishca sa~gkhyA saMyoga eva ca| vibhAgashca pRuthaktvaM ca  
parimANamathApi ca||29||

saMskAro~abhyAsa ityete guNA j~jeyAH parAdayaH| siddhyupAyAshcikitsAyA  
lakShaNaistAn pracakShmahe॥30॥

deshakAlavayomAnapAkavIryarasAdiShu| parAparatve, yuktishca yojanA yA tu  
yujyate॥31॥

sa~gkhyA syAdgaNitaM, yogaH saha saMyoga ucyate| dravyANAM  
dvandvasarvaikakarmajo~anitya eva ca||32||

vibhAgastu vibhaktiH syAdviyogo bhAgasho grahah| pRuthaktvaM syAdasaMyogo  
vailakShaNyamanekatA॥33॥

parimANaM punarmAnaM, saMskAraH karaNaM matam| bhAvAbhyasanamabhyAsaH  
shllanaM satatakrīyA॥34॥

iti svalakShaNairuktA guNAH sarve parAdayaH| cikitsA yairaviditairna yathAvat  
pravartate॥35॥

*Paratva* (excellence), *aparatva* (non-excellence), *yukti* (rationale), *sankhya* (enumeration), *samyoga* (conjunction), *vibhaga* (disjunction), *prithaktva* (separateness), *parimana* (measurement), *samskara* (processing) and *abhyasa* (practice): these properties are known as *paradi* (beginning with *para*). They are the means of success (in treatment), I am explaining them with definitions.

*Paratva* and *aparatva* are used in relation to place, time, age, measure, *vipaka*, *veerya*, *rasa* etc. *Yukti* is the rational planning (of therapeutic measures). *Sankhya* is mathematics (including statistics). Joining together (of entities) is *samyoga*. This is of three types according to the active participation of both, all or one partner. It is non-eternal. *Vibhaga* is also of three types – *vibhakti* (excision), *viyoga* (disjoining) and *bhagaso graha* (division). *Prithaktva* is of three types: *asamyoga* (spatial separateness), *vailaksanya* (class separateness), and *anekata* (individual separateness). *Parimana* denotes measures (of all types, including weights). *Samskara* is processing. *Abhyasa* is regular use of substance, habituation and practice. Thus, all the *paradi* properties are described with their definitions, which if unknown, do not let the therapy proceed properly. [29-35]

गुणा गुणाश्रया नोक्तास्तस्माद्रसगुणान् भिषक्। विद्याद्वयगुणान् कर्तुरभिप्रायाः पृथग्विधाः॥३६॥  
guṇā guṇāśrayā nōktāstasmādrasaguṇān bhiṣak| vidyāddravyaguṇān karturabhiprāyāḥ  
pr̥thagvidhāḥ॥३६॥

guNA guNAshrayA noktAstasmAdrasaguNAn bhiShak| vidyAddravyaguNAn [11]  
karturabhiprAyAH pRuthagvidhAH||36||

Properties are not said to be located within properties (i.e., within themselves). Hence a physician should take the properties of *rasas* as those of *dravyas*, taking into account the different intentions of the author. [36]

अतश्च प्रकृतं बुद्ध्वा देशकालान्तराणि च। तन्त्रकर्तुरभिप्रायानुपायांश्चार्थमादिशेत्॥३७॥

ataśca prakṛtarṇ buddhvā dēśakālāntarāṇi ca|  
tantrakarturabhiprāyānupāyāṁścārthamādiśēt||37||

atashca prakRutaM buddhvA deshakAlAntarANi ca|  
tantrakarturabhiprAyAnupAyAMshcArthamAdishet||37||

Hence one should decide the meaning after knowing the context, the factors like place and time, author's intentions and the scriptural methods (like *tantrayukti*). [37]

षड्विभक्तीः प्रवक्ष्यामि रसानामत उत्तरम्। षट् पञ्चभूतप्रभवाः सङ्ख्याताश्च यथा रसाः॥३८॥

ṣaḍvibhaktīḥ pravakṣyāmi rasānāmata uttaram| ṣaṭ pañcabhūtaprabhavāḥ  
saṅkhyātāśca yathā rasāḥ॥३८॥

ShaDvibhaktIH pravakShyAmi rasAnAmata uttaram| ShaT pa~jcabhUtaprabhavAH  
sa~gkhyAtAshca yathA rasAH||38||

Hereafter, I will tell about the six divisions of *rasa* and also that the *rasas* have originated from the pancha mahabhuta. [38]

### *Origin and basic composition of rasa*

सौम्या: खल्वापोऽन्तरिक्षप्रभवाः प्रकृतिशीता लघ्व्यश्चाव्यक्तरसाश्च, तास्त्वन्तरिक्षादभ्रश्यमाना भ्रष्टाश्च पञ्चमहाभूतगुणसमन्विता जडगमस्थावराणां भूतानां मूर्तीरभिप्रीणयन्ति, तासु मूर्तिषु षडभिमूर्च्छन्ति रसाः॥३९॥

saumyāḥ khalvāpō'ntarikṣaprabhavāḥ prakṛtiśītā laghvyaścāvyaktarasāśca, tāstvantarikṣādbhraśyamānā bhraṣṭāśca pañcamahābhūtaguṇasamanvitā jaṅgamasthāvarāṇāṁ bhūtānāṁ mūrtīrabhiprīṇayanti, tāsu mūrtiṣu ṣaḍabhimūrcchanti rasāḥ॥३९॥

saumyAH khalvApo~antarikShaprabhavAH prakRutishItA laghvyaShcAvyaktarasAshca, tAstvantarikShAdbhrashyamAnA bhraShTAshcapa~jcamahAbhUtaguNasamanvitA [13] ja~ggamasthAvarANAM bhUtAnAM mUrtIrbhiprINayanti, tAsu [14] mUrtiShu ShaDabhimUrcchanti rasAH॥३९॥

Water is predominantly composed of soma (apa), generated in sky, naturally cold, light and having unmanifested rasas. This, while falling from the sky, gets endowed with the properties of five mahabhuta and thus dropped (on the ground) nourishes the physical forms of animals and plants. In this process, six rasas manifest in water. [39]

तेषां षण्णां रसानां सोमगुणातिरेकान्मध्यरो रसः, पृथिव्यग्निभूयिष्ठत्वादम्लः, सलिलाग्निभूयिष्ठत्वाल्लवणः, वाय्वग्निभूयिष्ठत्वात् कटुकः, वाय्वाकाशातिरिक्तत्वातिक्तः, पवनपृथिवीव्यतिरेकात् कषाय इति। एवमेषा रसानां षट्त्वमुपपन्नं न्यूनातिरेकविशेषान्महाभूतानां भूतानामिव स्थावरजडगमानां नानावर्णकृतिविशेषाः; षट्कृत्वाच्च कालस्योपपन्नो महाभूतानां न्यूनातिरेकविशेषः॥४०॥

tēṣāṁ ṣaṇṇāṁ rasānāṁ sōmaguṇātirēkānmadhūrō rasāḥ,  
pṛthivyagnibhūyisṭhatvādamlāḥ, salilāgnibhūyisṭhatvāllavaṇāḥ, vāyvagnibhūyisṭhatvāt  
kaṭukāḥ, vāyvākāśātirikttatvāt, pavanapṛthivīyatirēkāt kaṣāya iti] ēvamēṣāṁ  
rasānāṁ ṣaṭtvamupapannaṁ nyūnātirēkaviśēśānmahābhūtānāṁ bhūtānāmiva  
sthāvarajaṅgamānāṁ nānāvarṇākṛtiviśēśāḥ; ṣadṛuktvācca kālasyōpapanno  
mahābhūtānāṁ nyūnātirēkaviśēśāḥ॥४०॥

teShAM ShaNNAM rasAnAM somaguNAAtirekAnmadhuro [16] rasaH,  
pRuthivyagnibhUyiShThatvAdamlaH, salilAgnibhUyiShThatvAllavaNaH,  
vAyyagnibhUyiShThatvAtkaTukaH, vAyvAkAshAtiriktatvAttiktaH,  
pavanapRuthivIvyatirekAt kaShAya iti] evameShAM rasAnAM ShaTtvamupapannaM  
nyUnAtirekavisheShAnmahAbhUtAnAM bhUtAnAmiva sthAvaraja~ggamAnAM  
nAnAvarNAkRutivisheShAH;ShaDRutukatvAcca kAlasyopapanno mahAbhUtAnAM  
nyUnAtirekavisheShaH॥४०॥

Of the six rasas, madhura rasa is produced by the predominance of soma (apa), amla by that of prithvi and agni, lavana by that of apa and agni, katu by that of vayu and agni, tikta by that of vayu and akasha, and kashaya by that of vayu and prithvi. Thus, the six

manifestations of rasas take place according to shortage and excess of mahabhutas like various complexions and shapes in plants and animals. The shortage and excess of mahabhuta is possible due to kala (the time factor) having six seasons. [40]

तत्राग्निमारुतात्मका रसाः प्रायेणोर्ध्वभाजः, लाघवादुत्प्लवनत्वाच् वायोरुर्ध्वज्वलनत्वाच्च वहनेः; सलिलपृथिव्यात्मकास्तु प्रायेणाधोभाजः, पृथिव्या गुरुत्वान्निम्नगत्वाच्चोदकस्य; व्यामिश्रात्मकाः पुनरुभयतोभाजः||४१||

tatrāgnimārutātmakā rasāḥ prāyēnōrdhvabhājāḥ, lāghavādutplavanatvācca vāyōrūrdhvajvalanatvācca vahnēḥ; salilapṛthiv্যātmakāstu prāyēnādhōbhājāḥ, pṛthiv্যā gurutvānnimnagatvāccōdakasya; vyāmīśrātmakāḥ punarubhayatōbhājāḥ||41||

tatrAgnimArutAtmakA rasAH prAyeNordhvabhAjaH, lAghavAdutplavanatvAcca [19]  
vAyorUrdhvajvalanatvAcca vahneH; salilapRuthivyAtmakAstu  
prAyeNAdhobhAjaH,pRuthivyA gurutvAnnimnagatvAccodakasya; vyAmishrAtmakAH  
punarubhayatobhAjaH||41||

Amongst these, the *rasas* having agni and vayu often move upwards because of vayu's property of lightness and rushing up and agni's property of flaming up. Those predominant in apa and prithvi often move downwards due to heaviness of prithvi and downward moving tendency of apa (water). Those having mixed constitutions move both ways. [41]

तेषां षणां रसानामेकैकस्य यथाद्रव्यं गुणकर्माण्यनुव्याख्यास्यामः||४२||

tēṣāṁ ṣaṇñāṁ rasānāmēkaikasya yathādravyam  
guṇakarmāṇyanuvyākhyāsyāmaḥ||42||

teShAM ShaNNAM rasAnAmekaikasya yathAdravyaM  
guNakarmANyanuvyAkhyAsyAmaH||42||

Now I shall describe the properties and actions of each of the six *rasas* according to *dravyas* (which are their substrata). [42]

#### *Actions of madhura rasa and effects of its excessive use*

तत्र, मधुरो रसः शरीरसात्म्याद्रसरुधिरमांसमेदोस्थिमज्जौजःशुक्राभिवर्धन आयुष्यः षडिन्द्रियप्रसादनो बलवर्णकरः पित्तविषमारुतघ्नस्तृष्णादाहप्रशमनस्त्वच्यः केशः कण्ठयो बल्यः प्रीणनो जीवनस्तर्पणो बृहणः स्थैर्यकरः क्षीणक्षतसन्धानकरो धाणमखकण्ठौष्ठजिह्वाप्रह्लादनो दाहमूर्च्छाप्रशमनः षट्पदपिपीलिकानामिष्टतमः स्निग्धः शीतो गुरुश्च एव इगुणोऽप्येक एवात्यर्थमपयज्यमानः स्थौल्यं माद्वमालस्यमतिस्वप्नं गौरवमनन्नाभिलाषमग्नेर्दोर्बल्यमास्यकण्ठयोर्मासाभिवृद्धिः श्वासकासप्रतिश्यायालसक्षीतज्वरानाहास्यमाधुर्यवमथुसञ्जास्वरप्रणाशगलगण्डगण्डमालाश्लीपद-गलशोफबस्तिधमनीगलोपलेपाक्ष्यामयाभिष्यन्दानित्येवम्प्रभृतीन् कफजान् विकारानुपजनयति (१)||४३||

tatra, madhurō rasāḥ  
śarīrasātmyādrasarudhiramāṁsamēdōsthimajjujahśukrabhivardhana āyuṣyah  
śaḍindriyaprasādanō balavarṇakaraḥ  
pittaviśamārutaghnastrṣṇādāhapraśamanastvacyah kēśyah kaṇṭhyō balyah pṛīṇanō  
jīvanastarpaṇō bṛmhāṇah sthairyakaraḥ kṣīṇakṣatasandhānakarō

ghrāṇamukhakanṭhauṣṭhajihvāprahlādanō dāhamūrcchāpraśamanah  
 ṣaṭpadapīlikānāmiṣṭatamaḥ snigdhaḥ śītō guruśca| sa ēvaṅguṇo'pyēka  
 ēvātyarthamupayujyamānah sthāulyam mārdavamālasyamatisvapnam  
 gauravamanannābhilāṣamagnērdaurbalyamāsyakaṇṭhayōrmāṁsābhivṛddhim  
 śvāsakāsapratiśyāyālasakaśītajvarānāhāsyamādhuryavamathusañjñāsvarapraṇāśagala  
 gaṇḍagaṇḍamālāslīpada-  
 galaśōphabastidhamanīgalōpalēpākṣyāmayābhiṣyandāṇityēvamprabhṛtīn kaphajān  
 vikārānupajanayati (1)|43|

tatra, madhuro rasaH  
 sharIrasAtmyAdrasarudhiramAMsamedosthimajjaHshukrAbhivardhana AyuShyaH  
 ShaDindriyaprasAdano  
 balavarNakaraHpittaviShamArutaghnaṣtRuShNAdAhaprashamanastvacyaH keshyaH  
 kaNThyo balyaH prINano jIvanastarpaNo bRuMhaNaH  
 sthairyakaraHkShINakShatasandhAnakaro  
 ghrANamukhakaNThauShThajihvAprahlAdano [20] dAhamUrcchAprashamanaH  
 ShaTpadapipIlikAnAmiShTatamaH snigdhaH shItogurushca| sa eva<sub>gguNo</sub>apyeka  
 evAtyarthamupayujyamAnaH sthāulyaM  
 mArḍavamAlasyamatisvapnaMgauravamanannAbhilAShamagnerdaurbalyamAsyakaNT  
 hayormAMsAbhivRuddhiMshvAsakAsapratishyAyAlasakashItajvarAnAhAsyamAdh  
 uryavamathusañjñAsvarapraNAshagalagaNDagaNDamAIAshllpada-galashophabastidha  
 manIgalopalepAkShyAmayAbhiShyandAṇityevamprabhRutIn kaphajAn  
 vikArAnupajanayati (1)|43|

Amongst the six *rasas*, the *madhura rasa*, because of its suitability to the body, promotes rasa dhatu, rakta,mamsa, meda dhatu, asthi dhatu, majja dhatu,ojas and shukra. It is also conducive to increasing the lifespan of the person, is pleasing to the six sense organs, promotes strength and lustre, alleviates pitta and vayu, neutralizes poisons, and pacifies thirst and heat. It is beneficial for skin, hair, throat and strength and is nourishing, vitalizing, saturating, bulk-promoting and stabilizing. It promotes healing of wounds of the emaciated. It provides good feeling in nose, mouth, throat, lips and tongue; alleviates fainting, is most liked by the bees and ants, and is unctuous, cold and heavy.

This *rasa*, though having so many qualities, if used singly and excessively, causes obesity, softness, laziness, excessive sleep, heaviness, loss of desire for food, poor digestion with mildness of appetite, abnormal growth in mouth and throat, dyspnea, cough, coryza, *alasaka*, fever with shivering, hardness in bowels, sweetness in mouth, vomiting, loss of consciousness and voice, goitre, cervical adenitis, filariasis, pharyngitis, (mucous) coating in bladder, arteries and throat, eye diseases, conjunctivitis etc. [43.1]

#### *Actions of amla rasa and effects of its excessive use*

अम्लो रसो भक्तं रोचयति, अग्निं दीपयति, देहं बृंहयति ऊर्जयति, मनो बोधयति, इन्द्रियाणि वृढीकरोति,  
 बलं वर्धयति, वातमनुलोमयति, हृदयं तर्पयति, आस्यमासावयति, भुक्तमपकर्षयति क्लेदयति जरयति,

प्रीणयति, लघुरुष्णः स्निग्धश्चा स एवडगुणोऽप्येक एवात्यर्थमुपयज्यमानो दन्तान् हर्षयति, तर्षयति, सम्मीलयत्यक्षेणी, संवेजयति लोमानि, कफं विलापयति, पितमभिवर्धयति, रक्तं दूषयति, मांसं विदहति, कायं शिथिलीकरोति, क्षीणक्षतकृशदुर्बलानां शवयथमापादयति, अपि च  
क्षताभिहतदष्टदग्धभग्नशनप्रच्यतावमत्रितपरिसर्पेतमदितच्छन्नभिन्नविशिलष्टोद्विद्धोत्पिष्टादीनि  
पाचयत्याग्नेयस्वभावात्, पेरिदहौति कण्ठमुरो हृदयं च (२)।४३।

amlō rasō bhaktam rōcayati, agniṁ dīpayati, dēham bṛmhayati ūrjayati, manō bōdhayati, indriyāṇi dṛḍhikarōti, balaṁ vardhayati, vātamanulōmayati, hṛdayaṁ tarpayati, āsyamāsrāvayati, bhuktamapakarṣayati klēdayati jarayati, prīṇayati, laghuruṣṇāḥ snigdhaśca] sa ēvaṅguṇo'pyēka ēvātyarthamupayujyamānō dantān harṣayati, tarṣayati, sammīlayatyakṣiṇī, samvējayati lōmāni, kapham vilāpayati, pittamabhivardhayati, raktam dūṣayati, māṁsaṁ vidahati, kāyaṁ śithilīkarōti, kṣīṇakṣatakṛśadurbalānāṁ śvayathumāpādayati, api ca  
kṣatābhīhatadaṣṭadagdhabhagnaśūnapracyutāvamūtritaparisarpitamarditacchin nabhinnaviśliṣṭōdviddhōtpiṣṭādīni pācayatyāgnēyasvabhāvāt, paridahati kanṭhamurō hṛdayaṁ ca (२)।४३।

amlo raso bhaktaM rocyati, agniM dlpayati, dehaM bRuMhayati Urjayati, mano bodhayati, indriyANi dRuDhlkaroti, balaM vardhayati, vAtamanulomayati, hRudayaMtarpayati, AsyamAsrAvayati, bhuktamapakarShayati kledayati jarayati, prINayati, laghuruShNaH snigdhashca] sa eva<sub>gguNo</sub>apyeka evAtyarthamupayujyamAno dantAn harShayati, tarShayati, sammllayatyakShiNI, saMvejayati lomAni, kaphaM vilApayati, pittamabhivardhayati, raktaM dUShayati, mAmsaM vidahati, kAyaM shithillkaroti, kShINakShatakRushadurbaLAnAM shvayathumApAdayati, api cakShatAbhihatadaShTadagdhabhagnashUnapracyutAvamUtritaparisarpitamarditacchi nnabhinnavishliShTodvidhotpiShTAdIni pAcayatyAgneyasvabhAvAt, paridahatikaNThamuro hRudayaM ca (२)।४३।

*Amla rasa* makes food relishing, stimulates agni, enhances body bulk and energizes it, awakens the mind, firms the sense organs, increases *bala* (strength), causes *vatanulomana* (normal movement of vata), nourishes the heart, increases secretions in the mouth, propels, moistens, and digests food, gives satisfaction, and is light, hot and unctuous.

This, though endowed with so many qualities, if used singly and excessively, makes teeth sensitive, causes thirst, causes closure of eyes, raises the body hair, liquifies kapha, aggravates pitta, affects blood morbidity, causes inflammation in muscles and laxity in body, produces swelling in wasted, injured, emaciated and debilitated persons, because of its *agneya* nature causes suppuration in wounds, injuries, bites, burns, fractures, swellings, dislocations, poisoned spots due to urination and contact of insects, compressed, excised, incised, punctured and crushed etc., and causes burning sensation in throat, chest and the cardiac region. [43.2]

#### *Actions of lavana rasa and effects of its excessive use*

लवणो रसः पाचनः क्लेदनो दीपनश्च्यावनश्छेदनो भेदनस्तीक्ष्णः सरो विकास्यधः संस्यवकाशकरो वातहरः स्तम्भबन्धसङ्घातविधमनः सर्वरसप्रत्यनीकभूतः, आस्यमासावयति, कफं विष्णन्दयति,

मार्गान् विशोधयति, सर्वशरीरावयवान् मृदुकरोति, रोचयत्याहारम्, आहारयोगी, नात्यर्थं गुरुः स्त्रिनर्धं उष्णश्च। स एव इन्द्रियाणि प्रयोगे एवात्यर्थं मुपयुज्य मानः पितं कोपयति, रक्तं वर्धयति, तर्षयतै, मूर्च्छयति, तापयति, दारयति, कुष्णाति मांसानि, प्रेगालयति कुष्ठानि, विषं वर्धयति, शोफान् स्फोटयति, दन्ताश्चयावयति, पंस्त्वमुपहन्ति, इन्द्रियाण्यपरुणदभि, वलिपलितखालित्यमापादयति, अपि च लोहितपित्ताम्लपित्तोवै सर्पेवातरक्तविचर्चिकेन्द्रलुप्तप्रभृतीनिवकारानुपजनयति (३)।४३।

lavaṇo rasaḥ pācanaḥ klēdanō dīpanaścyāvanaśchēdanō bhēdanastīksṇaḥ sarō vikāsyadhaḥsraṁsyavakāśakarō vātaharaḥ stambhabandhasaṅghātavidhamanaḥ sarvarasapratyānīkabhūtaḥ, āsyamāsrāvayati, kapham viṣyandayati, mārgān viśōdhayati, sarvaśārīrāvayavān mṛdūkarōti, rōcayatyāhāram, āhārayōgī, nātyartham guruḥ snigdha uṣṇāscal sa ēvaṅguṇo'pyēka ēvātyartham upayujyamānaḥ pittam kōpayati, raktam vārdhayati, tarṣayati, mūrcchayati, tāpayati, dārayati, kuṣṇāti māṁsāni, pragālayati kuṣṭhāni, viṣam vārdhayati, śōphān sphoṭayati, dantāṁścyāvayati, puṁstvam upahanti, indriyānyuparunadbhi, valipalitakhālityamāpādayati, api ca lōhitapittāmlapittavisarpavātaraktavicarcikēndraluptaprabhṛtīnvikārānupajanayati (३)।४३।

lavaNo rasaH pAcanaH kledano dlpanashcyAvanashchedano bhedanastIkShNaH saro vikAsyadhaHsraMsyavakAshakaro [22] vAtaharaHstambhabandhasa~gghAtavidhamanaH sarvarasapratyānīkabhUtaH, AsyamAsrAvayati, kaphaM viShyandayati, mArgAn vishodhayati, sarvasharIrAvayavAnmRudUkaroti, rocyatyAhAram, AhArayogl, nAtyartham guruH snigdha uShNashcal sa eva<sub>gguNo</sub>apyeka evAtyartham upayujyamAnaH pittaM kopayati, raktaM vārdhayati, tarShayati, mUrcchayati [23], tApayati, dArayati, kuShNAti mAMsAni, pragAlayati kuShThAni, viShaM vārdhayati, shophAn sphoTayati, dantAMshcyAvayati, puMstvam upahanti, indriyANyuparunadbhi, valipalitakhAlityamApAdayati, api calohitapittAmlapittavisarpavAtaraktavicarcikendraluptaprabhRutInvikArAnupajanayati (३)।४३।

*Lavana rasa* is digestive, moistening, appetizing, pouring, expectorant, mass-breaking, irritant, laxative, quickly spreading in body, oozing, space-creating, vata alleviating, diminishes stiffness, viscid, diminishes the perception of other tastes if added in excess, increases secretions in mouth, liquefies kapha, cleanses channels, softens all the body-parts, gives relish to food, is a supplement of food. It is not very heavy, unctuous and hot.

This, though having so many qualities, if used singly and excessively, vitiates pitta, aggravates rakta, causes thirst, fainting, heat, tearing, sloughing, increases leprosy and other skin diseases, aggravates poisons, weakens teeth, aggravates inflammations, impairs potency, hinders sense organs, gives rise to wrinkles, grey hair and baldness, and also produces disorders like internal hemorrhage, acid gastritis, erysipelas, *vatarakta*, eczema, alopecia etc. [43.3]

### *Actions of katu rasa and effects of its excessive use*

कटुको रसो वक्त्रं शोधयति, अग्निं दीपयति, भुक्तं शोषयति, घाणमासावयति, चक्षुर्विरेचयति, स्फटीकरोतीन्द्रियाणि, अलसकश्वयथपचयोदर्दभिष्यन्दस्नेहस्वेदकलेदमलानुपहन्ति, रोचयत्यशनं, कण्डुर्विनाशयति , व्रणानवसादयति, क्रिमीन् हिनस्ति, मांसं विलिखति, शोणितसङ्घातं भिनति, बन्धौश्छिनति, मार्गान् विवृणोति, श्लेष्माणं शमयति, लघुरुष्णो रुक्षश्च। स एवडग्गणोऽप्येक एवात्यर्थमपयज्यमानो विपाकप्रभावात् पुस्त्वमपहन्ति, रसवीर्यप्रभावान्मोहयन्ति, ग्लापयति, सादयति, कर्शयति, मूर्च्छयति, नमयति, तमयति, भ्रमयते, कण्ठं परिदहति, शरीरतापमुपजनयति, बलं क्षिणोति, तृष्णां जनयति; अपि च वायवग्निगुणबाहुल्यादभ्रमदवथुकम्पतोदभेदैश्चरणभुजपाश्वपृष्ठप्रभृतिष मारुतजान् विकारानुपजनयति (४)

kaṭukō rasō vaktraṁ śōdhayati, agnīṁ dīpayati, bhuktāṁ śōṣayati, ghrāṇamāsrāvayati, cakṣurvirecayati, sphaṭīkarōtīndriyāṇi, alasakaśvayathūpacayōdardābhiṣyandasnēhasvēdaklēdamalānupahanti, rōcayatyashanāṁ, kaṇḍūrvināśayati , vraṇānavasādayati, krimīn hinasti, māṁsaṁ vilikhati, sōṇitasaṅghātāṁ bhinatti, bandhāṁśchinatti, mārgān vivṛṇōti, ślēṣmāṇāṁ śamayati, laghuruṣṇō rūkṣaśca| sa ēvaṅguṇo'pyēka ēvātyarthatupayujyamānō vipākaprabhāvāt puṁstvamupahanti, rasavīryaprabhāvānmōhayanti, glāpayati, sādayati, karṣayati, mūrcchayati, namayati, tamayati, bhramayati, kaṇṭham paridahati, śarīratāpamupajanayati, balaṁ kṣīṇōti, tṛṣṇāṁ janayati; api ca āyvagniguṇabāhulyādbhramadavathukampatōdabhēdaiścaraṇabhujaṁparśvapṛṣṭhaprabhṛtiṣu mārutajān vikārānupajanayati (4)

kaTuko raso vaktraM shodhayati, agniM dIpayati, bhuktaM shoShayati, ghrANamAsrAvayati, cakShurvirecayati, sphaTIkarotIndriyANI, alasakashvayathUpacayodardAbhiShyandasnehasvedakledamal Anupahanti, rocayatyashanaM, kaNDURvinAshayati [25] , vraNANavasAdayati, krimIn hinasti, mAmsaMvilikhati, shoNitasa~gghAtaM bhinatti, bandhAMshchinatti, mArgAn vivRuNoti, shleShmANaM shamayati, laghuruShNo rUkShashca| sa eva<sub>gguNo</sub>apyeka evAtyarthamupayujyamAno vipAkaprabhAvAt puMstvamupahanti, rasavIryaprabhAvAnmohayanti, glApayati, sAdayati, karshayati, mUrcchayati, namayati, tamayati, bhramayati, kaNTaM paridahati, sharIratApamupajanayati, balaM kShiNoti, tRuShNAM janayati; api cavAyvagniguNabAhulyAdbhramadavathukampatodabhedaishcaraNabhujapArshvapRu ShThaprabhRutiShu mArutajAn vikArAnupajanayati (4)

*Katu rasa* cleanses mouth, stimulates digestion, absorbs food, causes secretion from the nose and eyes, makes the sense organs clear, alleviates *alasaka*, swelling, corporulence, urticarial patches, blocked channels, unctious, sweating, moisture and dirt, making food relishing, destroys itching, depresses wounds, kills germs, scrapes muscles, checks the coagulation of blood, cuts the bindings, expands the channels, pacifies kapha, and is light, hot and rough.

This though having so many properties, if used singly and excessively, can damage sexual potency due to the effect of *vipaka*, cause mental confusion, malaise, depression, emaciation, fainting, bending, feeling of darkness, giddiness, burning in

throat, body-heat, loss of strength and thirst due to the effect of *rasa* and *veerya* and *prabhava*, over and above, due to abundance of *vayu* and *agni*, it produces *vatika* disorders in feet, hands, sides, back etc. particularly with symptoms like dizziness, burning pain, tremors, piercing and tearing pains. [43.4]

#### *Actions of tikta rasa and effects of its excessive use*

तिक्तो रसः स्वयमरोचिष्णुरप्यरोचकञ्जो विषद्धनः क्रिमिघ्नो  
 मूर्छादाहकण्डुकष्ठतृष्णाप्रेशमनस्त्वङ्गमांसयोः स्थिरीकरणो ज्वरघ्नो दीपनः पाचनः स्तन्यशोधनो  
 लीखनः क्लेदमेदोवसामज्जलसीकापूयस्वेदमूत्रपुरीषपित्तश्लेष्मोपशोषणो रुक्षः शीतो लघुश्च। स  
 एवङ्गणोऽप्येक एवात्यर्थमपयज्यमानो रौक्ष्यात्खरविषदस्वभावाच्च  
 रसरुधिरमांसमेदोस्थिमज्जंशक्राण्युच्छोषयति, स्रोतसां खरत्वमपपादयति, बलमादते, कर्शयति,  
 ग्लपयति, मोहयति, भ्रमयति, वदनमुपशोषयति, अपरांश्च वातौविकारानुपजनयति (५)

tiktō rasah svayamarociṣṇurapyarōcakaghnō viṣaghnaḥ krimighnō  
 mūrcchādāhakaṇḍukuṣṭhatṛṣṇāpraśamanastvaṁmāṁsayoḥ sthīrīkaraṇō jvaraghnō  
 dīpanaḥ pācanāḥ stanyaśōdhanō lēkhanāḥ  
 klēdamēdōvasāmajjalasīkāpūyasvēdamūtrapurīṣapittaślēṣmōpaśōṣaṇō rūkṣaḥ śītō  
 laghuścaḥ sa ēvaṅguṇo’pyēka ēvātyarthamupayujyamānō  
 raukṣyātkharaviṣadasvabhāvācca  
 rasarudhiramāṁsamēdōsthimajjaśukrāṇyucchōṣayati, srōtasāṁ kharatvamupapādayati,  
 balamādattē, karṣayati, glapayati, mōhayati, bhramayati, vadanaṁupāśōṣayati,  
 aparāṁśca vātavikārānupajanayati (5)

tikto rasaH svayamarociShNurapyarocakaghno viShaghnaH krimighno  
 mUrcchAdAhakaNDUKuShThatRuShNAprashamanastva~gmAMsayoH sthirlkaraNo  
 jvaraghnodlpanaH pAcanaH stanyashodhano lekhanaH  
 kledamedovasAmajjalasIkApUyasvedamUtrapurIShapittashleShmopashoShaNo  
 rUkShaH shlto laghushcaḥ sa eva<sub>gguṇo</sub>apyeka evAtyarthamupayujyamAno  
 raukShyAtkharaviShadasvabhAvAcca  
 rasarudhiramAMsamedosthimajjashukrANyucchoShayati,  
 srotasAMkharatvamupapAdayati, balamAdatte, karshayati, glapayati, mohayati,  
 bhramayati, vadanaṁupashoShayati, aparAMshca vAtavikArAnupajanayati (5)

*Tikta rasa*, though itself non-relishing, enhances appetite, is anti-poison, anthelmintic, alleviates fainting, burning sensation, itching, skin disorders and thirst, provides firmness to skin and muscles, is antipyretic, appetizer, digestive, galactodepurant (i.e., an agent that cleanses any adverse reaction of milk), *lekhana* (making thin), absorbs moisture, reduces fat, muscle-fat, marrow, lymph, pus, sweat, urine, feces, pitta and kapha; and is rough, cold and light.

This, though possessing so many qualities, if used singly and excessively, on account of its roughness, coarseness and non-sliminess, dries up *rasa* *dhatu*, *rakta* *dhatu*, *mamsa* *dhatu*, *meda* *dhatu*, *asthi* *dhatu*, *majja* *dhatu* and *shukra* *dhatu*, causes coarseness in channels, takes away strength, produces emaciation, malaise, mental confusion, giddiness, dryness of mouth and other *vatika* disorders. [43.5]

*Actions of kashaya rasa and effects of its excessive use*

कषायो रसः संशमनः सङ्ग्राही सन्धानकरः पीडनो रोपणः शोषणः स्तम्भनः श्लेष्मरक्तपित्तप्रशमनः शरीरक्लेदस्योपयोक्ता रूक्षः शीतोऽलघुश्च| स एव इगुणोऽप्येक एवात्यर्थमुपयुज्यमान आस्यं शोषयति, हृदयं पीडयति, उदरमाध्मापयति, वाचं निगृहणाति, स्रोतांस्यवबृद्धनाति, श्यावत्वमापादयति, पुंस्त्वमुपहन्ति, विष्टभ्य जरां गच्छति, वातमूत्रपुरीषरेतांस्यवगृहणाति, कर्शयति, ग्लपयति, तर्षयति, स्तम्भयति, खरविशदरूक्षत्वात् पक्षवधग्रहापतानकार्दितप्रभृतीश्च वातविकारानुपजनयति||४३||

kaṣāyō rasah saṁśamanah saṅgrāhī sandhānakarah pīḍanō rōpaṇah śōṣanah  
stambhanaḥ ślēṣmaraktapittapraśamanah śarīraklēdasyōpayōktā rūkṣah śītō’laghuścaḥ  
sa ēvaṅguṇo’pyēka ēvātyarthamupayujyamāna ḥasyam śōṣayati, hṛdayam pīḍayati,  
udaramādhmāpayati, vācam nigṛhṇāti, srōtāṁsyavabadhnāti, śyāvatvamāpādayati,  
puṁstvamupahanti, viṣṭabhyā jarāṁ gacchati, vātamūtrapurīśarētāṁsyavagṛhṇāti,  
karshayati, glapayati, tarṣayati, stambhayati, kharavīśadarūkṣatvāt  
pakṣavadhagrahāpatānakārditaprabhṛtīṁśca vātavikārānupajanayati||43||

kaShAyo rasaH saMshamanaH sa~ggrAhl sandhAnakaraH pIDano ropaNaH  
shoShaNaH stambhanaH shleShmaraktapittaprashamanaH  
sharlrukledasyopayoktArUKShaH shlto~alaghushcaḥ sa eva<sub>gguNo</sub>apyeka  
evAtyarthamupayujyamAna AsyaM shoShayati, hRudayaM pIDayati,  
udaramAdhmApayati, vAcaM nigRuhNAti,  
srotAMsyavabadhnAti, shyAvatvamApAdayati, puMstvamupahanti, viShTabhya jarAM  
gacchati, vAtamUtrapuriSharetAMsyavagRuhNAti, karshayati, glapayati, tarShayati,  
stambhayati, kharavishadarUkShatvAt  
pakShavadhagrahApatAnakArditaprabhRutIMshca vAtavikArAnupajanayati||43||

*Kashya rasa* is pacifying, astringent, union-promoting, compressing, healing, absorbing, checking (discharges), pacifies kapha, rakta and pitta, utilizes the body fluid, is rough, cold and slightly light.

This, though possessing so many qualities, if used singly and excessively, dries up mouth, causes heart-ache, it causes distended abdomen, obstructs speech, constricts body channels, darkens complexion, decreases reproductive potency, delays digestion, causes distension of abdomen, checks flatus, urine, feces and semen, produces emaciation, malaise, thirst, stiffness, and because of its coarseness, non-sliminess and roughness, causes *vatika* disorders like hemiplegia, spasm, convulsions, facial paralysis etc. [43]

इत्येवमेते षड्साः पृथक्त्वेनैकत्वेन वा मात्रशः सम्यगुपयुज्यमाना उपकाराय भवन्त्यर्थ्यात्मलोकस्य,  
अपकारकराः पनरतोऽन्यथा भवन्त्युपयुज्यमानाः; तोन् विद्वानुपकारार्थमेव मात्रशः  
सम्यगुपयोजयेदिति||४४||

ityēvamētē ṣadrasāḥ pṛthaktvēnaikatvēna vā mātraśah samyagupayujyamānā  
upakārāya bhavantyadhyātmalōkasya, apakārakarāḥ punaratō’nyathā  
bhavantyupayujyamānāḥ; tān vidvānupakārārthamēva mātraśah  
samyagupayōjayēditi||44||

ityevamete ShaDrasAH pRuthaktvenaikatvena vA mAtrashaH [27]  
samyagupayujyamAnA upakArAya bhavantyadhyAtmalokasya, apakArakarAH  
punarato~anyathAbhavantyupayujyamAnAH; tAn vidvAnupakArArthameva mAtrashaH  
samyagupayojayediti||44||

These six *rasas*, when used in proper quantity, are beneficial for all human beings, otherwise become harmful. Hence the wise should use these properly in proper quantity in order to derive benefit (from them) [44]

### *Veerya (potency)*

अवन्ति चात्र- शीतं वीर्येण यद्द्रव्यं मधुरं रसपाकयोः| तयोरम्लं यदुष्णं च यद्द्रव्यं कटुकं तयोः||४७||

bhavanti cātra- śītam vīryēna yaddravyam̄ madhuram̄ rasapākayōḥ| tayōramlāṁ  
yaduṣṇāṁ ca yaddravyam̄ kaṭukam̄ tayōḥ||45||

bhavanti cAtra- shItaM vIryeNa yaddravyaM madhuraM rasapAkayoH| tayloramlAM  
yaduShNaM ca yaddravyaM kaTukaM tayoH||45||

The substance (drug or diet) which is *madhura* in *rasa* and *vipaka* (biotransformation) is *sheeta* (cold) in *veerya* (potency). Likewise, the substance, *amla* (or *katu*) in *rasa* and *vipaka*, is *ushna* (hot) in *veerya*. [45]

तेषां रसोपदेशेन निर्देश्यो गुणसङ्ग्रहः| वीर्यतोऽविपरीतानां पाकतश्चोपदेक्ष्यते||४६||

यथा पयो यथा सर्पिर्यथा वा चव्यचित्रकौ| एवमादीनि चान्यानि निर्दिशेद्रसतो भिषक्||४७||

tēṣāṁ rasōpadēśēna nirdēśyō gunasaṅgrahah| vīryatō’viparītānāṁ  
pākataścōpadēkṣyatē||46||

yathā payo yathā sarpiryathā vā cavyacitrakau| ēvamādīni cānyāni nirdiśēdrasatō  
bhiṣak||47||

teShAM [29] rasopadeshena nirdeshyo guNasa~ggraHaH| vIryato~aviparItAnAM  
pAkashcopadekShyate||46||

yathA payo yathA sarpiryathA vA cavyacitrakau| evamAdIni cAnyAni nirdishedrasato  
bhiShak||47||

In cases where *veerya* and *vipaka* are in conformity with *rasa*, the properties are known by the *rasa* itself as in cases of milk, ghee, (*madhura-sheeta*) and *chavya-chittraka* (*katu-ushna*). In such other cases too, the physician should know (the properties) on the basis of *rasa*. [46-47]

मधुरं किञ्चिदुष्णं स्यात् कषायं तिक्तमेव च| यथा महत्पञ्चमूलं यथाऽब्जानूपमामिषम्||४८||

लवणं सैन्धवं नोष्णमम्लमामलकं तथा| अर्कागुरुगुड्चीनां तिक्तानामुष्णमुच्यते||४९||

madhuram̄ kiñciduṣṇāṁ syāt kaṣāyam̄ tiktamēva ca| yathā mahatpañcamūlāṁ  
yathā’bjānūpamāmiṣam||48||

lavaṇāṁ saindhavaṁ nōṣṇamamlamāmalakaṁ tathā| arkāguruguḍūcīnāṁ  
tiktānāmuṣṇamucyatē||49||

madhuraM [30] ki~jciduShNaM syAt kaShAyaM tiktameva ca| yathA  
mahatpa~jcamUlaM yathA~abjAnUpamAmiSham||48||

lavaNaM [31] saindhavaM noShNamamlamAmalakaM tathA| arkAguruguDUcInAM  
tiktAnAmuShNamucyate||49||

There are certain exceptions to this: some substances, though *madhura*, *kashya* and *tikta* in *rasa*, are *ushna* in *veerya* such as *brihat pancha mula* and meat of aquatic and marshy animals. Rock salt, though being *lavana*, and *amalaka*, though being *amla* in *rasa*, is not *ushna* (in *veerya*). *Arka*, *aguru* and *guduchi* are *tikta* (in *rasa*) but *ushna* (in *veerya*). [48-49]

किञ्चिदम्लं हि सङ्ग्राहि किञ्चिदम्लं भिनति च। यथा कपित्थं सङ्ग्राहि भेदि चामलकं तथा॥५०॥

पिप्पली नागरं वृष्णं कटु चावृष्णमुच्यते। कषायः स्तम्भनः शीतः सोऽभयायामतोऽन्यथा॥५१॥

तस्माद्रसोपदेशेन न सर्व द्रव्यामादिशेत्। वृष्टं तुल्यरसेऽप्येवं द्रव्ये द्रव्ये गुणान्तरम्॥५२॥

kiñcidamlam hi saṅgrāhi kiñcidamlam bhinatti ca| yathā kapitthaṁ saṅgrāhi bhēdi  
cāmalakam tathā||50||

pippalī nāgaram vṛṣyam kaṭu cāvṛṣyamucyatē| kaśāyah stambhanaḥ śītaḥ  
sō’bhayāyāmatō’nyathā||51||

tasmādrasōpadēśēna na sarvam dravyāmādiśēt| dṛṣṭam tulyarasē’pyēvam dravyē  
dravyē guṇāntaram||52||

ki~jcidamlaM hi sa~ggrAhi ki~jcidamlaM bhinatti ca| yathA kapitthaM sa~ggrAhi bhedi  
cAmalakaM tathA||50||

pippall [32] nAgaraM vRuShyaM kaTu cAvRuShyamucyate| kaShAyaH stambhanaH  
shItaH so<sub>abhayAyAmato</sub>anyathA||51||

tasmAdrasopadeshena [33] na sarvaM dravyAmAdishet| dRuShTaM  
tulyarase~apyevaM dravye dravye guNAntaram||52||

Likewise, there are also variations in actions of *rasa*. Some substance of *amla rasa* is astringent (such as *kapittha*) while other is purgative (such as *amalaka*). *Katu rasa* is non-aphrodisiac but *pippali* and *shunthi* (through *katurasa*) are aphrodisiac. *Kashaya rasa* is *stambhana* (stopping or stalling) and *sheeta* (cold) but *haritaki* (through *kashaya*) is the exception (it is laxative and hot). Hence only on the basis of *rasa*, one cannot prescribe all the substances when even in substances of similar *rasa*, difference in properties is observed in individual cases. [50-52]

रौक्ष्यात् कषायो रुक्षाणामुत्तमो मर्द्यमः कटुः। तिक्तोऽवरस्तथोष्णानामुष्णत्वाल्लवणः परः॥५३॥

मृद्योऽम्लः कटुकश्चान्त्यः स्निग्धानां मृधुरः परः। मृद्योऽम्लो लवणश्चान्त्यो रसः  
स्नेहान्निरुच्यते॥५४॥

मृद्योत्कृष्टावरा: शैत्यात् कषायस्वादुतिक्तकाः | स्वादुर्गुरुत्वादधिकः कषायाल्लवणोऽवरः॥५५॥

अम्लात् कटुस्ततस्तिक्तो लघुत्वादुत्तमोत्तमः| केचिल्लघूनामवरमिच्छन्ति लवणं रसम्॥५६॥

गौरवे लाघवे चैव सोऽवरस्तूभयोरपि॥५७॥

raukṣyāt kaśāyō rūkṣāñāmuttamō madhyamaḥ kaṭuhḥ  
tiktō'varastathōṣṇāñāmuṣṇatvāllavaṇaḥ paraḥ॥५३॥

madhyō'mlaḥ kaṭukaścāntyah snigdhānāṁ madhuraḥ paraḥ| madhyō'mlō  
lavaṇaścāntyō rasaḥ snēhānnirucyate॥५४॥

madhyō'tkṛṣṭāvarāḥ śaityāt kaśāyasvādutiktakāḥ | svādurgurutvādadhikāḥ  
kaśāyāllavaṇo'varaḥ॥५५॥

amlāt kaṭustatastikto laghutvāduttamōttamaḥ| kēcillaghūnāmavaramicchanti lavaṇāṁ  
rasam॥५६॥

gauravē lāghavē caiva sō'varastūbhayōrapi॥५७॥

aukShyAt kaShAyo rUkShANAmuttamo madhyamaH kaTuH|  
tikto~avarastathoShNAnAmuShNatvAllavaNaH paraH॥५३॥

madhyo~amlaH kaTukashcAntyaH snigdhAnAM madhuraH paraH| madhyo~amlo  
lavaNashcAntyo rasaH snehAnnirucyate॥५४॥

madhyotkRuShTAvarAH shaityAt kaShAyasvAdutiktakAH [34] | svAdurgurutvAdadhikaH  
kaShAyAllavaNo~avaraH॥५५॥

amlAt kaTustatastikto laghutvAduttamottamaH| kecillaghUnAmavaramicchanti [35]  
lavaNaM rasam॥५६॥

gaurave lAghave caiva [36] so~avarastUbhayorapi॥५७॥

From the point of view of six prominent guna, the *rasas* have been positioned in three degree. Considering *rukshatva* (dryness), *kashaya* comes in the highest degree, *katu* in the medium degree and *tikta* in the lowest degree. Considering *ushnatva* (hotness), *lavana* comes on the top, *amla* in the middle, *katuka* on the bottom. From the point of view of *snigdhatva* (unctuousness), *madhura* is in the highest degree, *amla* in the middle and *lavana* in the lowest one.

Considering *sheetatwa* (coldness), *madhura*, *kashaya* and *tikta* come in order of superiority. Considering *gurutva* (heaviness), *madhura* comes in the highest degree, *kashaya* comes next, and *lavana* in the lowest degree. Considering *laghutva* (lightness), *tikta* comes on the top, then *katu* and lastly *amla*. Some take *lavana* as the inferior one in the category light *rasas*. Thus, *lavana* is placed in the lowest order considering both *gaurava* (heaviness) and *laghutva* (lightness). [53-56]

## *Vipaka* (metabolites)

परं चातो विपाकानां लक्षणं सम्प्रवक्ष्यते॥५७॥

कटुतिक्तकषायाणां विपाकः प्रायशः कटुः। अम्लोऽम्लं पचयते स्वादुर्मधुरं लवणस्तथा॥५८॥

param cātō vipākānāṁ lakṣaṇāṁ sampravakṣyatē॥५७॥

kaṭutiktakaśāyāṇāṁ vipākah prāyaśah kaṭuh| amlō’mlam pacyatē svādurmadhuram lavaṇastathā॥५८॥

paraM [38] cAto vipAkAnAM lakShaNaM sampravakShyate॥57॥

kaTutiktakaShAyANAM vipAkaH prAyashaH kaTuH| amlo~amlaM pacyate svAdurmadhuraM lavaNastathA॥58॥

Hereafter, *vipaka* will be described. Substances having *katu*, *tikta* and *kashaya rasa*s have often *katu vipaka*, *amla* is transformed into *amla*, *vipaka*, and *madhura* and *lavana* have *madhura vipaka*. [57-58]

मधुरो लवणाम्लौ च स्निग्धभावात्त्रयो रसाः। वातमूत्रपुरीषाणां प्रायो मोक्षे सुखा मताः॥५९॥

कटुतिक्तकषायास्तु रुक्षभावात्त्रयो रसाः। दुःखाय मोक्षे दृश्यन्ते वातविष्मूत्ररेतसाम्॥६०॥

madhurō lavaṇāmlau ca snigdhabhāvāttrayō rasāḥ| vātamūtrapurīṣāṇāṁ prāyō mōkṣē sukhā matāḥ॥५९॥

kaṭutiktakaśāyāstu rūkṣabhāvāttrayō rasāḥ| duḥkhāya mōkṣē dṛśyantē vātavīṣmūtrarētasām॥६०॥

madhuro lavaNAmlau ca snigdhabhAvAttrayo rasAH| vAtamUtrapuriShANAM prAyo mokShe sukhA matAH॥५९॥

kaTutiktakaShAyAstu rUkShabhAvAttrayo rasAH| duHkhAya mokShe dRushyante vAtaviNmUtraretasAm॥60॥

*Madhura*, *lavana* and *amla*: these three *rasas*, due to *snigdhatva* (unctuousness), are often conducive to elimination of flatus, urine and faeces.

On the contrary, *katu*, *tikta* and *kashaya*: these three *rasas*, due to *rukshatva* (dryness), create hindrances in the elimination of flatus, faeces, urine and semen. [59-60]

शुक्रहा बद्धविष्मूत्रो विपाको वातलः कटुः। मधुरः सृष्टविष्मूत्रो विपाकः कफशुक्रलः॥६१॥

पित्तकृत् सृष्टविष्मूत्रः पाकोऽम्लः शुक्रनाशनः। तेषां गुरुः स्यान्मधुरः कटुकाम्लावतोऽन्यथा॥६२॥

śukrahā baddhavīṣmūtrō vipākō vātalah kaṭuh| madhurah sr̄ṣṭavīṣmūtrō vipākah kaphaśukralah॥61॥

pittakṛt sr̄ṣṭavīṣmūtrah pākō’mlah śukranāśanah| tēṣāṁ guruḥ syānmadhurah kaṭukāmlāvatō’nyathā॥62॥

shukrahA baddhaviNmUtro vipAko vAtalaH kaTuH| madhuraH sRuShTaviNmUtro  
vipAkaH kaphashukralaH||61||

pittakRut sRuShTaviNmUtraH pAko~amlaH shukranAshanaH| teShAM guruH  
syAnmadhuraH kaTukAmlAvato~anyathA||62||

*Katu vipaka* impairs shukra(semen), obstructs (excretion of) faeces and urine and aggravates vata. *Madhura vipaka* helps excretion of urine and faeces from the body, increases kapha and semen. *Amla vipaka* aggravates pitta, helps excretion of faeces and urine and damages semen. Amongst them, *madhura vipaka* is *guru* (heavy) and the other two (*katu* and *amla*) *vipakas* are *laghu*. [61-62]

विपाकलक्षणस्याल्पमध्यभूयिष्ठतां प्रति| द्रव्याणां गुणवैशेष्यात्तत्र तत्रोपलक्षयेत्||६३||

vipākalakṣaṇasyālpamadhyabhūyiṣṭhatāṁ prati| dravyāṇāṁ guṇavaiśeṣyāttatra  
tatrōpalakṣayēt||63||

vipAkakShaNasyAlpamadhyabhUyiShThatAM [41] prati| dravyANAM  
guNavaisheShyAttatra tatropalakShayet||63||

According to variations in guna (properties) there is also variation in degree (lowest, medium and highest) of *vipaka*. [63]

मृदुतीक्ष्णगुरुलघुस्निग्धरुक्षोष्णशीतलम्| वीर्यमष्टविधं केचित्, केचिदद्विविधमास्थिताः||६४||

शीतोष्णमिति, वीर्यं तु क्रियते येन या क्रिया| नावीर्यं कुरुते किञ्चित् सर्वा वीर्यकृता क्रिया॥६५॥

mṛduṭīkṣṇagurulaghushnigdharukṣoṣṇaśītalām| vīryamaṣṭavidham kēcit,  
kēciddvividhamāsthitāḥ||64||

शीतोष्णमिति, वीर्यम् तु क्रियते येना या क्रियाऽनवीर्यम् कुरुते कीचित् सर्वा वीर्यकृता  
क्रियाऽ॒||65||

mRudutIkShNagurulaghushnigdharUkShoShNashItalam| vIryamaShTavidhaM kecit,  
keciddvividhamAsthitAH||64||

shltoShNamiti, vIryaM tu kriyate yena yA kriyA| nAvIryaM kurute ki~jcit sarvA  
vIryakRutA kriyA||65||

Some hold that there is eight-fold *veerya*: *mridu* (soft), *tikshna* (sharp), *guru* (heavy), *laghu* (light), *snigdha* (unctuous), *ruksha* (rough), *ushna* (hot) and *sheeta* (cold) while some opine that there are only two *veeryas* : *sheeta* (cold) and *ushna* (hot). In fact, *veerya* (potency) is that which is responsible for each and every action. The substance can exert no action in absence of *veerya* and as such (it is concluded that) all actions are exerted due to *veerya*. [64-65]

### Characteristics of rasa, veerya, vipaka

रसो निपाते द्रव्याणां, विपाकः कर्मनिष्ठया| वीर्यं यावदधीवासान्निपाताच्चोपलभ्यते॥६६॥

rasō nipātē dravyānāṁ, vipākah̄ karmaniṣṭhayā| vīryam  
yāvadadhīvāsānnipātāccōpalabhyatē||66||

raso nipAte dravyANAM, vipAkaH karmaniShThayA| vIryaM  
yAvadadhIvAsAnnipAtAccopalabhyate||66||

*Rasa* is perceived by its contact with the body (particularly tongue). *Vipaka* is perceived by (observing) the final effect (on body) and *veerya* is comprehended (by the action exerted) during the period from administration till excretion (of the drug). [66]

### Prabhava (specific influential effect)

रसवीर्यविपाकानां सामान्यं यत्र लक्ष्यते| विशेषः कर्मणां चैव प्रभावस्तस्य स स्मृतः||६७||

rasaviryavipakānāṁ sāmānyam yatra lakṣyatē| viśeṣah̄ karmaṇām caiva  
prabhāvastasya sa smṛtaḥ||67||

rasavIryavipAkAnAM sAmAnyAM yatra lakShyate| visheShaH karmaNAM caiva  
prabhAvastasya sa smRutaH||67||

In cases, where, inspite of similarity in *rasa*, *veerya* and *vipaka*, there is difference in action, this (difference) is said to be due to *prabhava* (specific potency). [67]

कटुकः कटुकः पाके वीर्योष्णशिच्चत्रको मतः| तद्वद्दन्ती प्रभावात् विरेचयति मानवम् ||६८||

विषं विषधनमुक्तं यत् प्रभावस्तत्र कारणम्| ऊर्ध्वानुलोमिकं यच्च तत् प्रभावप्रभावितम्||६९||

मणीनां धारणीयानां कर्म यद्विविधात्मकम्| तत् प्रभावकृतं तेषां प्रभावोऽचिन्त्य उच्यते ||७०||

सम्यग्विपाकवीर्याणि प्रभावश्चाप्युदाहृतः| किञ्चिद्रसेन कुरुते कर्म वीर्येण चापरम्||७१||

द्रव्यं गुणेन पाकेन प्रभावेण च किञ्चन। रसं विपाकस्तौ वीर्यं प्रभावस्तानपोहति॥७२॥

kaṭukah̄ kaṭukah̄ pākē vīryōṣṇāścitrakō mataḥ| tadvaddantī prabhāvāttu virēcayati  
mānavam ||68||

viṣam viṣaghnamuktam yat prabhāvastatra kāraṇam| ūrdhvānulōmikam yacca tat  
prabhāvaprabhāvitam||69||

maṇīnāṁ dhāraṇīyānāṁ karma yadvividhātmakam| tat prabhāvakṛtam tēśām  
prabhāvō'cintya ucyatē ||70||

samyagvipākavīryāṇi prabhāvaścāpyudāhṛtaḥ| kiñcidrasēna kurutē karma vīryēṇa  
cāparam||71||

dravyam guṇēna pākēna prabhāvēṇa ca kiñcana| rasam̄ vipākastau vīryam̄  
prabhāvastānapōhati||72||

kaTukaH kaTukaH pAke vIryoShNashcitrako mataH| tadvaddantl prabhAvAttu virecayati  
mAnavam [51] ||68||

viShaM viShaghnamuktaM yat prabhAvastatra [52] kAraNam| UrdhvAnulomikaM yacca  
tat prabhAvaprabhAvitam||69||

maNInAM dhAraNlyAnAM karma yadvividhAtmakam| tat prabhAvakRutaM teShAM  
prabhAvo~acintya ucyate [53] ||70||

samyagvipAkavIryANi prabhAvashcApyudAhRutaH| ki~jcidasena [54] kurute karma  
vIryeNa cAparam||71||

dravyaM guNena pAkena prabhAveNa ca ki~jcanal rasaM vipAkastau vIryaM  
prabhAvastAnapohati||72||

(For instance) just as *chitraka* is *katu* in *rasa* and *vipaka* and *ushna* in *veerya*, similar is *danti* but the latter is purgative (while the former is not). Poison acts as antidote to poison, here also the cause is *prabhava*. Likewise, the action of *urdhwabhabhagahara* (emetics) and *anulomika* (purgatives) is due to *prabhava*. Various effects of gems worn (on the body) is also due to *prabhava*, but their *prabhava* is incomprehensible. Thus, *vipaka*, *veerya* and *prabhava* are explained well. Some drug acts by (means of) *rasa*, other by *veerya* and other by *guna*, *vipaka* or *prabhava*. In case of equality of strength, *vipaka* subdues *rasa*, *veerya* subdues both, and *prabhava* all these three. These are the natural relative degree of strength. [68-72]

### Means of knowing *rasa*

बलसाम्ये रसादीनामिति नैसर्गिकं बलम्। षण्णां रसानां विजानमुपदेक्ष्याम्यतः परम्॥७३॥

स्नेहनप्रीणनाहलादमार्दवैरुपलभ्यते। मुखस्थो मधुरश्चास्यं व्याप्नुवैलिम्पतीव च॥७४॥

दन्तहर्षान्मुखासावात् स्वेदनान्मुखबोधनात्। विदाहाच्चास्यकण्ठस्य प्राशयैवाम्लं रसं वदेत्॥७५॥

प्रलीयन् क्लेदविष्यन्दमार्दवं कुरुते मुखे। यः शीघ्रं लवणो ज्ञेयः स विदाहान्मुखस्य च॥७६॥

संवेजयेद्यो रसानां निपाते तुदतीव च। विदहन्मुखनासाक्षिं संसावी स कटुः स्मृतः॥७७॥

प्रतिहन्ति निपाते यो रसनं स्वदते न च। स तिक्तो मुखवैशद्यशोषप्रहलादकारकः ॥७८॥

वैशद्यस्तम्भजाऽयैर्यो रसनं योजयेद्रसः। बृद्धनातीव च यः कण्ठं कषायः स विकास्यपि॥७९॥

balasāmyē rasādīnāmiti naisargikam balam| śaṇṇām rasānām  
vijñānamupadēkṣyāmyataḥ param||73||

snēhanaprījanāhlādamārdavairupalabhyatē| mukhasthō madhuraścāsyam  
vyāpnuvamōllimpatīva ca||74||

dantaharşānmukhāsrāvāt svēdanānmukhabōdhanāt| vidāhāccāsyakanṭhasya  
prāsyāivāmlam rasam vadēt||75||

pralīyan klēdaviṣyandamārdavam kurutē mukhē| yaḥ śīghram lavaṇō jñēyah sa  
vidāhānmukhasya ca||76||

saṁvējayēdyō rasānāṁ nipātē tudatīva ca| vidahanmukhanāsākṣi saṁsrāvī sa katuh  
smṛtaḥ||77||

pratihanti nipātē yō rasanāṁ svadatē na ca| sa tikto  
mukhavaiśadyaśōṣaprahādakārakah ||78||

vaiśadyastambhajādyairyō rasanāṁ yōjayēdrasah| badhnātīva ca yaḥ kanṭham  
kaśāyah a vikāsyapi||79||

balasAmye rasAdInAmiti naisargikaM balam|73| ShaNNAM rasAnAM  
vij~jAnamupadekShyAmyataH param||73||

snehanaprINanAhlAdamArdaVairupalabhyate| mukhastho madhurashcAsyaM  
vyApnuva@mllimpatlva ca||74||

dantaharShAnmukhAsrAvAt svedanAnmukhabodhanAt| vidAhAccAsyakaNThasya  
prAshyaivAmlaM rasaM vadet||75||

prallyan kledaviShyandamArdavaM kurute mukhel yaH shlighraM lavaNo j~jeyaH sa  
vidAhAnmukhasya ca||76||

saMvejayedyo rasAnAM nipAte tudatlva ca| vidahanmukhanAsAkShi saMsraVl sa  
kaTuH smRutaH||77||

pratihanti nipAte yo rasanaM svadate na ca| sa tikto  
mukhavaishadyashoShaprahAdakArakaH [58] ||78||

vaishadyastambhajADyairyō rasanāM yojayedrasaH| badhnAtIva ca yaH kaNThaM  
kaShAyaH sa vikAsyapi||79||

Hereafter, I will describe the characters of the six *rasas*. *Madhura rasa* is known by its actions – unction, pleasure, exhilaration and softening. While in mouth, it pervades and as if making a coating there.

If, after putting in mouth, the teeth become sensitive, or if there is salivation, sweating, gustatory sensations and burning in mouth and throat, that should be labelled as *amla rasa*.

*Lavana rasa* is dissolved quickly and produces moistening, watering, softening and burning in mouth.

That which, on contact, irritates and produces piercing pain in tongue and simulate secretions with burning from mouth, nose and eyes is pungent.

That which, on contact with tongue, destroys all other gustatory perceptions so that no other taste is perceived and also gives rise to non-sliminess and dryness in mouth, along with cheerfulness, is *tikta (rasa)*.

*Kashaya* is that which produces non-sliminess, stiffness and insensibility in tongue, as if choking the throat and is also *vikasiṇ* nature. [73-79]

एवमुक्तवन्तं भगवन्तमात्रेयमग्निवेश उवाच- भगवन्! श्रतमेतदवितथमर्थसम्पदयुक्तं भगवतो  
यथावद्द्रव्यगुणकर्माधिकारे वचः, परं त्वाहारविकाराणां वैरोधिकानां लक्षणमनतिसङ्क्षेपेणोपदिश्यमानं  
शुश्रूषामह इति॥८०॥

ēvamuktavantaṁ bhagavantamātrēyamagnivēśa uvāca- bhagavan!  
śrutamētadavitaṁthamarthaṁ sampadyuktaṁ bhagavatō yathāvaddravyaguṇakarmādhikārē<sup>१</sup>  
vacah, param tvāhāravikārāṇāṁ vairōdhikānāṁ  
lakṣaṇaṁ manatiṣaṅkṣepēṇopadiśyaṁ mānaṁ śūsrūṣāmaha iti॥८०॥

evamuktavantaM bhagavantamAtreyamagnivesha uvAca- bhagavan!  
shrutametadavitathamarthaṁ sampadyuktaM bhagavato  
yathAvaddravyaguNakarmAdhikArevacaH, paraM tvAhAravikArANAM [61]  
vairodhikAnAM lakShaNamanatisa~gkShepeNopadishyamAnaM shushrUShAmaha  
iti॥८०॥

Having listened to this description by Lord Atreya, Agnivesha said, “Sir, we heard your factual and significant talk on dravya, guna and karma. Now we want to hear not too brief description of the antagonistic food items”. [80]

### Concept of viruddha (incompatibility or antagonism)

#### *Viruddha dravya (incompatible substances)*

तमवाच भगवानात्रेयः- देहधातुप्रत्यनीकभतानि द्रव्याणि देहधातुभिर्विरोधमापद्यन्ते;  
परस्परगुणविरुद्धानि कानिचित्, कानिचित् संयोगात्, संस्कारादपराणि, देशकालमात्रादिभिश्चापराणि,  
तथा स्वभावादपराणि॥८१॥

tamuvača bhagavānātrēyah- dēhadhātupratyanīkabhūtāni dravyāṇi  
dēhadhātubhirvirōdhamāpadyantē; parasparguṇaviruddhāni kānicit, kānicit saṁyōgāt,  
saṁskārādāparāṇi, dēśakālamātrādibhiścāparāṇi, tathā svabhāvādāparāṇi॥८१॥

tamuvača bhagavānAtreyāH- dehadhātupratyanīkabhūtāni dravyāṇi  
dehadhātubhirvirodhamāpadyante; parasparguṇaviruddhāni kānicit, kānicit  
saMyogAt,saMskArAdāparāNi, deshakālamātrādibhishcāparāNi, tathā  
svabhāvādāparāNi॥८१॥

Lord Atreya addressed to him – the substances which are contrary to deha-dhatu behave with *virodha* (antagonism) to them. This antagonism may be in terms of properties, combination, processing, place, time, dose etc. or natural composition. [81]

#### *Examples of incompatible substances*

तत्र यान्याहारमधिकृत्य भूयिष्ठमुपयुज्यन्ते तेषामेकदेशं वैरोधिकमधिकृत्योपदेक्ष्यामः- न मत्स्यान्  
पयसा सहाभ्यवहरेत्, उभये हयेतन्मधुरं मधुरविपाकं महाभिष्यन्दि शीतोष्णत्वाद्विरुद्धवीर्यं  
विरुद्धवीर्यत्वाच्छोणितप्रदूषणाय महाभिष्यन्दित्वान्मार्गोपरोधाय च॥८२॥

tatra yānyāhāramadhikṛtya bhūyiṣṭhamupayujyantē tēṣāmēkadēśam  
vairōdhikamadhikṛtyōpadēkṣyāmaḥ- na matsyān payasā sahābhyaवaharēt, ubhayām

hyētanmadhuraṁ madhuravipākam mahābhīṣyandi śītōṣṇatvādviruddhavīryaṁ  
viruddhavīryatvācchōṇitapradūṣaṇāya mahābhīṣyanditvānmārgōparōdhāya ca||82||

tatra yAnyAhAramadhiK Rutyā bhUyiShThamupayujyante teShAmekadeshaM  
vairodhikamadhiK RutyopadekShyAmaH- na matsyAn payasA  
sahAbhyavaharet, ubhayaM hyetanmadhuraM madhuravipAkaM mahAbhiShyandi  
shltoShNatvAdviruddhavIryaM  
viruddhavIryatvAcchoNitapradUShaNAyamahAbhiShyanditvAnmArgoparodhAya  
ca||82||

Amongst them, I will mention the incompatible (*vairodhika*) food which is mostly used, such as, one should not take fish with milk. Both of them are having *madhura* (*rasa*). *Madhura vipaka, mahabhīṣyandi* (great obstructor of the channels), because milk is *sheeta* and fish is *ushna* which is *viruddhavīrya* (antagonistic in terms of *veerya*), due to conflicting *veeryas*, it vitiates blood and due to being *mahabhīṣyandi*, creates obstruction in channels. [82]

तन्निशम्यात्रेयवचनमन् भद्रकाप्योऽग्निवेशमुवाच- सर्वानेव मत्स्यान् पयसा  
सहाभ्यवहरेदन्यत्रैकस्माच्चिलिचिमात्, स पनः शकली लोहितनयनः सर्वतो लोहितराजी रोहिताकारः  
प्रायो भूमौ चरति, तं चेत् पयसा सहाभ्यवहरेन्नःसंशयं शोणितजानां विबन्धजानां च  
व्याधीनामन्यतममथवा मरणं प्राप्नुयादिति॥८३॥

tanniśamyātrēyavacanamanu bhadrakāpyō'gnivēśamuvāca- sarvānēva matsyān  
payasā sahābhīṣyavahare danyatraikasmāccilicimāt, sa punaḥ śakalī lōhitānayanaḥ  
sarvatō lōhitārājī rōhitākāraḥ prāyō bhūmau carati, tam cēt payasā  
sahābhīṣyavahare nihsaṁśayāṁ śōṇitajānāṁ vibandhajānāṁ ca  
vyādhīnāmanyatamamathavā maraṇāṁ prāpnuyāditi॥८३॥

tannishamyAtreyavacanamanu bhadrakApyo~agniveshamuvAca- sarvAneva matsyAn  
payasA sahAbhyavaharedanyatraikasmAccilicimAt, sa punaH shakalllohitānayanaH  
sarvato lohitArAjl rohitAkAraH prAyo bhUmau carati, taM cet payasA  
sahAbhyavaharenniHsaMshayaM shoNitajAnAM vibandhajAnAM  
cavyAdhInAmanyatamamathavA maraNaM prApnuvAditi॥८३॥

Having heard the statement of Atreya, Bhadrakapya said to Agnivesha, “one may take all types of fish alongwith milk except only one -*chilchima*. That scaly, red-eyed, with alround red strips, having shape like that of *rohita* often moves on land. If one takes it along with milk, he undoubtedly becomes victim of one of the disorders of *rakta* (blood) or *vibandha* (constipation) or death”. [83]

नेति भगवानात्रेयः- सर्वानेव मत्स्यान्न पयसा सहाभ्यवहरेद् विशेषतस्त चिलिचिमं, स हि  
महाभिष्यन्दित्वात् स्थूललक्षणतरानेतान् व्याधीनुपजनयत्यामविषमुदौरयति च।  
ग्राम्यानुपौदकपिशितानि च मधुतिलगडपयोमाषमूलकबिसैर्विरुद्धान्यैर्वा नैकद्यमद्यात्, तन्मूलं हि  
बाधिर्यान्दयवेपथ्युजाङ्ग्यकलमूकतामैषिमण्यमथवा मरणमाप्नोति। न पौष्करं रोहिणीके शाकं कपोतान् वा  
सर्षपतैलभ्रष्टानमधुपयोभ्यां सहाभ्यवहरेत्, तन्मूलं हि  
शोणिताभिष्यन्दधमनीप्रवि(ति)चयापस्मारशङ्खकगलगण्डरोहिणीनामन्यतमं प्राप्नोत्यथवा मरणमिति।  
न मूलकलशुनकृष्णगन्धार्जकसुमुखसुरसादीनि भक्षयित्वा पयः सेव्यं, कुष्ठाबाधभयात् न जातुकशाकं न

निकं पक्वं मधुपयोऽयां सहोपयोज्यम्, एतदृथि मरणायाथवा बलवर्णतेजोवीर्योपरोधायालघुव्याधये  
 षाण्ड्याय चेति| तदेव निकं पक्वं न माषसूपगुडसर्पिर्भिः सहोपयोज्यं वैरोधिकत्वात्|  
 तथाऽमामातकमातुलङ्गनिकचकरमर्दमोचदन्तशठबद्रकोशामभवकपित्थतिन्तिडीक-  
 पारावताक्षोडपनसनालिकेरदाँडिमामलकान्येवम्प्रकाराणि चान्यानि द्रव्याणि सर्वं चाम्लं द्रवमद्रवं च  
 पयसा सह विरुद्धम्| तथा कडगुवनकमक्ष्ठकलत्थमाषनिष्पावा: पयसा सह विरुद्धाः|  
 पद्मोत्तरिकाशाकं शार्करो मैरेयो मधुं च सहोपयुक्तं विरुद्धं वातं चातिकोपयति| हारिद्रकः सर्षपतैलभृष्टो  
 विरुद्धः पितं चातिकोपयति| पायसौ मन्थानुपानो विरुद्धः श्लेष्माणं चातिकोपयति| उपोदिका  
 तिलकल्कसिद्धा हेतुरतीसारस्या बलाका वारुण्या सह कुल्माषेरपि विरुद्धा, सैव शूकरवसापरिभृष्टा  
 सदयो व्यापादयति| मयूरमांसमेरण्डसीसकावसक्तमेरण्डग्निप्लुष्टमेरण्डतैलयुक्तं सदयो व्यापादयति|  
 हारिद्रकमांसं हारिद्रसीसकावसक्तं हारिद्रग्निप्लुष्टं सदयो व्यापादयति; तदेव भैस्मपांशुपरिद्धस्तं सक्षोद्रं  
 सदयो मरणाय| मत्स्यनिस्तालनसिद्धाः पिप्पल्यस्तथा काकमाची मधुं च मरणाय| मधुं  
 चोष्णमृष्णार्तस्य च मधुं मरणाय| मधुसर्पिषी समघृते, मधुं वारि चान्तरिक्षं समघृतं, मधुं पुष्करबीजं,  
 मधुं पौत्वोष्णोदकं, भल्लातकोष्णोदकं, तक्रसिद्धः कम्पिल्कः, पर्युषिता काकमाची, अङ्गारशूल्यो  
 भासश्चेति विरुद्धानि| इत्येतद्यथाप्रश्नमभिनिर्देष्टं भवतीति||८४||

nēti bhagavānātrēyah- sarvānēva matsyānna payasā sahābhyaवaharēdviśēsatstu  
 cilicimāṁ, sa hi mahābhiṣyanditvāt sthūlalakṣaṇatarānētān  
 vyādhīnupajayanatyāmaviśamudīrayati caḥ grāmyānūpaudakapiśitāni ca  
 madhutilagudapayōmāśamūlakabisairvirūḍhadhānyairvā naikadhyamadyāt, tanmūlam  
 hi bādhiryāndhyavēpathujādyakalamūkatāmaiṇminyamathavā maraṇamāpnōti| na  
 pauṣkaram rōhiṇīkam ūkām kapōtān vā sarṣapatailabhraṣṭānmadhupayōbhyāṁ  
 sahābhyaवaharēt, tanmūlam hi  
 ūoṇitābhiṣyandadhamanīpravi(ti)cayāpasmāraśāṅkhagalagaṇḍarōhiṇīnāmanyatama  
 m̄ prāpnōtyathavā maraṇamiti| na mūlakalaśunakṛṣṇagandhārjakasumukhasurasādīni  
 bhakṣayitvā payah sēvyam, kuṣṭhābādhabhayāt| na jātukaśākam na nikucam pakvam  
 madhupayōbhyāṁ sahōpayōjyam, ētaddhi maraṇāyāthavā  
 balavarṇatējōvīryōparōdhāyālaghuvyādhayē ūāñdhyaāya cēti| tadēva nikucam pakvam  
 na māśasūpaguḍasarpibhīḥ sahōpayōjyam vairōdhikatvāt|  
 tathā "mrāmrātakamātuluṅganikucakaramardamōcadantaśaṭhabadarakōśāmrabbavyajā  
 mbavakapitthatintidīka- pārāvatākṣōḍapanasanālikēradādīmāmalakānyēvamprakārāṇi  
 cānyāni dravyāni sarvam cāmlam dravamadravam ca payasā saha viruddham| tathā  
 kaṅguvanakamakuṣṭhakakulatthamāśaniśpāvāḥ payasā saha viruddhāḥ|  
 padmōttarikāśākam ūarkarō mairēyō madhu ca sahōpayuktam viruddhām vātarām  
 cātikōpayatiḥ hāridrakah sarṣapatailabhrṣṭō viruddhāḥ pittam cātikōpayatiḥ pāyasō  
 manthānupānō viruddhāḥ ūlēśmānām cātikōpayatiḥ upōdikā tilakalkasiddhā  
 hēturaṭīsārasya| balākā vārunyā saha kulmāśairapi viruddhā, saiva  
 śūkaravasāparibhṛṣṭā sadyō vyāpādayati|  
 mayūramāṁsamēraṇḍasīsakāvasaktamēraṇḍāgniplusṭamēraṇḍatailayuktam sadyō  
 vyāpādayatiḥ hāridrakamāṁsam̄ hāridrasīsakāvasaktam̄ hāridrāgniplusṭam̄ sadyō  
 vyāpādayati; tadēva bhasmapāṁśuparidhvastam̄ sakṣaudram̄ sadyō maraṇāya|  
 matsyanistālanasiddhāḥ pippalyastathā kākamācī madhu ca maraṇāya| madhu  
 cōṣṇamamuṣṇārtasya ca madhu maraṇāya| madhusarpiśī samaghṛtē, madhu vāri  
 cāntarikṣam̄ samaghṛtam̄, madhu puṣkarabījam̄, madhu pītvōṣṇōdakam̄,  
 bhallātakōṣṇōdakam̄, takrasiddhāḥ kampillakah, paryuṣitā kākamācī, aṅgāraśūlyō  
 bhāsaścēti viruddhāni| ityētadyathāpраśnamabhinirdiṣṭam bhavatīti||८४||

neti bhagavAnAtreyaH- sarvAneva matsyAnna payasA sahAbhyavaharevisheShatastu  
 cilicimaM, sa hi mahAbhiShyanditvAt  
 sthUlalakShaNatarAnetAnvyAdhInupajanayatyAmaviShamudIrayati ca|  
 grAmyAnUpaudakapishitAni ca  
 madhutilaguDipayomAShamUlakabisairvirUDhadhAnyairvA [63] naikadhyamadyAt,  
 tanmUlaM hibAdhiryAndhyavepathujADyakalamUkatAmaiNmiNyamathavA [64]  
 maraNAMApnoti| na pauShkaraM rohiNIkaM shAkAM kapotAn vA  
 sarShapatailabhraShTAnmadhupayobhyAM sahAbhyavaharet, tanmUlaM  
 hishoNitAbhiShyandadhamanlpravi(ti)cayApasmArasha~gkhagalagaNDarohiNIInAma  
 nyatamaM prApnotyathavA maraNamiti| na  
 mUlakalashunakRuShNagandhArjakasumukhasurasAdIni bhakShayitvA payaH  
 sevyAM, kuShThAbAdhabhayAt| na jAtukashAkaM na nikucAM pakvaM  
 madhupayobhyAM sahopayojojam, etaddhi maraNAYAthavA  
 balavarNatejovIryoparodhAyAlaghuvyAdhaye ShANDhyAya ceti| tadeva nikucAM  
 pakvaM na mAshaSUpaguDasarpirbhIH sahopayojojam vairodhikatvAt|  
 tathA<sub>a</sub>amrAmrAtakamAtulu~gganikucakaramardamocadantashaThabadarakoshAmrabh  
 avyajAmbavakapithatintiDIka-pArAvatAkShoDapanasanAlikeradADimAmalakAnyevam  
 prakArANI cAnyAni dravyANI sarvaM cAmlaM dravamadravaM ca payasA saha  
 viruddham| tathA ka~gguvanakamakuShThakakulatthamASHaniShpAvAH [65] payasA  
 saha viruddhAH| padmottarikAshAkaM shArkaro maireyo madhu ca sahopayuktaM  
 viruddhaM vAtaM cAtikopayati| hAridrakaH sarShapatailabhRuShTo viruddhaH pittaM  
 cAtikopayati| pAyaso manthAnupAno viruddhaH shleShmA Nam cAtikopayati| upodikA  
 tilakalkasiddhA heturatlsArasya| balAkA vAruNyA saha kulmA Shairapi viruddhA, saiva  
 shUkaravasAparibhRuShTA sadyo vyApAdayati|  
 mayUramAMsameraNDasIsakAvasaktameraNDAgnipluShTameraNDatilayuktaM  
 sadyo vyApAdayati| hAridrakamAMsaM hAridrasIsakAvasaktaM hAridrAgnipluShTaM  
 sadyo vyApAdayati; tadeva bhasmapAMshuparidhvastaM sakShaudraM sadyo  
 maraNAYa| matsyanistAlanasiddhAH pippalyastathA kAkamAcl madhu ca maraNAYa|  
 madhu coShNamuShNArtasya ca madhu maraNAYa| madhusarpiShI samaghRute,  
 madhu vAri cAntarikShaM samaghRutaM, madhu puShkarabljaM, madhu  
 pltvoShNodakaM, bhallAtakoShNodakaM, takrasiddhaHkampillakaH, paryuShitA  
 kAkamAcl, a~ggArashUlyo bhAsashceti viruddhAni|  
 ityetadyathAprashnamabhinirdiShTaM bhavatIti||84||

“No”, said Lord Atreya. “One should not take any fish along with milk particularly *chilchima* because it being a great obstructor of channels produces these disorders with gross symptoms and also excites *amavisha*. Meat of domestic, marshy and aquatic animals should not be taken mixed with honey, sesamum, jaggery, milk, black gram, radish, lotus stalk or germinated grains because it causes deafness, blindness, tremors, coldness, indistinct voice, dumbness, nasal voice or death. The potherb of *pushkara* or *rohini* or (meat of) pigeon fried with mustard oil should not be taken along with honey and milk because it causes obstruction in blood-circulation, atherosclerosis, epilepsy, goitre, *rohini* or death. After eating radish, garlic, *sigru*, *arjaka*, *tulshi* etc. one should not take milk because of risk of skin diseases. The potherb of *jatuka* or ripe (fruit of) *nikucha* should not be taken alongwith honey and milk as it causes death or loss of strength,

luster, energy and prowess, impotency, and several severe diseases. The same ripe (fruit of) *nikucha* should not be taken with soup of blackgram, jaggery and ghee because they are antagonistic to each other. Likewise, *amra*, *amrataka*, *matulunga*, *nikucha*, *karamarda*, *mocha*, *dantashatha*, *badara*, *koshamra*, *bhavya*, *jambu*, *kapittha*, *tintidika*, *parawata*, *akshoda*, *panasa*, *narikela*, *dadima*, *amalaka* – these fruits and similar other substances, all sour liquids or non-liquids are antagonistic to milk. *Kangu*, *vanaka*, *makusthaka*, *kulattha*, black gram, and *nikucha* are antagonistic to milk. The potherb of *padmottarika* (*kusumbha*), *sharkara* and *maireya* (types of wine) and madhu, all used together are antagonistic, and vitiate vata too much. *Haridraka* (a bird) fried with mustard oil is antagonistic and vitiates pitta too much. *Payasa* (rice cooked with milk) taken with after-meal drink of *mantha* (a drink prepared from roasted grain flour) is antagonistic and vitiates *kapha* too much. *Upodika* (a potherb) cooked with sesamum paste causes diarrhea. (Meat of) *balaka* (crane) along with *varuni* (a type of wine) or *kulmada* (grains soaked with water and then fried) is antagonistic. The same fried with lard causes instantaneous death. Meat of peacock attached to the stick of *eranda*, cooked in the fire with castor wood fuel, and mixed with castor oil causes instantaneous death. Meat of *haridraka* attached with stick of *haridraka*, cooked in the fire of *haridra* causes instantaneous death. The same mixed with ash and dust along with honey also causes instantaneous death. *Pippali* fried with fish-cooking media and *kakamachi* mixed with honey causes death. Hot honey taken by a person afflicted with heat leads to death. Likewise, honey and ghee in equal quantity, honey and rainwater in equal quantity, honey and lotus seed, hot water after taking honey, hot water after taking *bhallataka*, *kampillaka* cooked with buttermilk, stale *kakamachi* and *bhasa* roasted on iron rod-all these are antagonistic. Thus, described according to the question. [84]

#### *Definition of viruddha (incompatibility)*

भवन्ति चात्र श्लोकाः-

यत् किञ्चिद् दोषमासाव्य न निर्हरति कायतः। आहारजातं तत् सर्वमहितायोपपद्यते॥८५॥

bhavanti cātra ślōkāḥ- yat kiñciddōṣamāśrāvya na nirharati kāyataḥ| āhārajātāṁ tat sarvamahitāyōpapadyatē||85||

bhavanti cAtra shlokAH- yat ki~jciddoShamAsrAvya [67] na nirharati kAyataH| AhArajAtaM tat sarvamahitAyopapadyate||85||

The entire (drug or) diet that excites the *dosha* but does not eliminate it out of the body, is harmful. [85]

#### *Types of viruddha (incompatibility)*

यच्चापि देशकालाग्निमात्रासात्म्यानिलादिभिः। संस्कारतो वीर्यतश्च कोष्ठावस्थाक्रमैरपि॥८६॥

परिहारोपचाराभ्यां पाकात् संयोगतोऽपि च। विरुद्धं तच्च न हितं हृत्सम्पदविधिभिश्च यत्॥८७॥

विरुद्धं देशतस्तावदूक्षतीक्षणादि धन्वनि। आनूपे स्निग्धशीतादि भेषजं यन्निषेव्यते॥८८॥

कालतोऽपि विरुद्धं यच्छीतरुक्षादिसेवनम्। शीते काले, तथोष्णे च कटुकोष्णादिसेवनम्॥८९॥

विरुद्धमनले तद्वदन्नपानं चतुर्विधे। मधुसर्पिः समधृतं मात्रया तद्विरुद्धयते॥९०॥

कटुकोष्णादिसात्म्यस्य स्वादुशीतादिसेवनम्। यत्तत् सात्म्यविरुद्धं तु विरुद्धं त्वनिलादिभिः॥९१॥

या समानगुणाभ्यासविरुद्धान्नौषधक्रिया। संस्कारतो विरुद्धं तद्यद्भोज्यं विषवद्भवेत्॥९२॥

एरण्डसीसकासक्तं शिखिमांसं यथैव हि। विरुद्धं वीर्यतो ज्ञेयं वीर्यतः शीतलात्मकम्॥९३॥

तत् संयोज्योष्णवीर्येण द्रव्येण सह सेव्यते। क्रूरकोष्ठस्य चात्यल्पं मन्दवीर्यमभेदनम्॥९४॥

मृदकोष्ठस्य गुरु च भेदनीयं तथा बहु। एतत् कोष्ठविरुद्धं तु, विरुद्धं स्यादवस्थया॥९५॥

श्रमव्यवायव्यायामसक्तस्यानिलकोपनम्। निद्रालसस्यालसस्य भोजनं श्लेष्मकोपनम्॥९६॥

यच्चानुत्सृज्य विण्मूत्रं भुड्कते यश्चाबुभुक्षितः। तच्च क्रमविरुद्धं स्याद्यच्चातिक्षुद्वशानुगः॥९७॥

परिहारविरुद्धं तु वराहादीन्निषेव्य यत्। सेवेतोष्णं घृतादींश्च पीत्वा शीतं निषेवते॥९८॥

विरुद्धं पाकतश्चापि दुष्टदुर्दारुसाधितम्। अपक्वतण्डुलात्यर्थपक्वदर्थं च यद्भवेत्। संयोगतो विरुद्धं तद्यथाऽम्लं पयसा सह॥९९॥

अमनोरुचितं यच्च हृदविरुद्धं तदुच्यते। सम्पदविरुद्धं तद्विद्यादसञ्जातरसं तु यत्॥१००॥

अतिक्रान्तरसं वाऽपि विपन्नरसमेव वा। ज्ञेयं विधिविरुद्धं तु भुज्यते निभृते न यत्। तदेवंविधमन्नं स्यादविरुद्धमुपयोजितम्॥१०१॥

yaccāpi dēśakālāgnimātrāsātmyānilādibhiḥ| saṁskāratō vīryataśca  
kōṣṭhāvasthākramairapi||86||

parihārōpacārābhyaṁ pākāt saṁyōgatō'pi ca| viruddhaṁ tacca na hitaṁ  
hṛtsampadvidhibhiśca yat||87||

viruddhaṁ dēśatastāvadrūkṣatīksṇādi dhanvanīl ānūpē snigdhaśītādi bhēṣajāṁ  
yanniṣēvyatē||88||

kālatō'pi viruddhaṁ yacchītarūkṣādisēvanam| śītē kālē, tathōṣṇē ca  
kaṭukōṣṇādisēvanam||89||

viruddhamanalē tadvadannapānaṁ caturvidhē| madhusarpiḥ samadhṛtaṁ mātrayā  
tadvirudhyatē||90||

kaṭukōṣṇādisātmyasya svāduśītādisēvanam| yattat sātmyaviruddhaṁ tu viruddhaṁ  
tvani�ādibhiḥ||91||

yā samānaguṇābhyaśaviruddhānnauṣadhaṅkriyā| saṁskāratō viruddhaṁ tadyadbhōjyam  
viṣavadbhavēt||92||

ēraṇḍasīsakāsaktam् śikhimāṁsam् yathaiva hi| viruddhaṁ vīryatō jñēyam् vīryataḥ  
śītalātmakam||93||

tat saṁyōjyōṣṇavīryēṇa dravyēṇa saha sēvyatē| krūrakōṣṭhasya cātyalpaṁ  
mandavīryamabhaṅdanam||94||

mṛdakōṣṭhasya guru ca bhēdanīyam tathā bahuḥ ētat kōṣṭhaviruddham tu, viruddham syādavasthayā||95||

śramavyavāyavyāyāmasaktasyānilakōpanam| nigrālasasyālasasya bhōjanam  
ślēśmakōpanam||96||

yaccānusrsjya viṇmūtram bhunktē yaścābubhukṣitah| tacca kramaviruddham  
syādyaccātikṣudvaśānugah||97||

parihārviruddham tu varāhādīnniśeva yat| sēvētōṣṇam gṛtādīṁśca pītvā śītam  
niśevatē||98||

viruddham pākataścāpi duṣṭadurdārusādhitam| apakvataṇḍulātyarthapakvadagdhām ca  
yadbhavēt| sarṇyōgatō viruddham tadyathā'mlam payasā saha||99||

amanōrucitarām yacca hṛdviruddham taducyatē| sampadviruddham  
tadvidyādasañjātarasām tu yat||100||

atikrāntarasām vā'pi vipannarasamēva vā| jñēyam vidhiviruddham tu bhujyatē nibṛtē  
na yat| tadēvarṇvidhamannam syādviruddhamupayōjitaṁ||101||

yaccApi deshakAIgnimAtrAsAtmyAnilAdibhiH| saMskArato vIryatashca  
koShThAvasthAkramairapi||86||

parihAropacArAbhyAM pAkAt saMyogato~api ca| viruddhaM tacca na hitaM  
hRutsampadvidhibhishca yat||87||

viruddhaM deshatastAvadrUkShatlkShNAdi dhanvani| AnUpe snigdhashItAdi  
bheShajaM yanniShevyate||88||

kAlato~api viruddhaM yaccItarUkShAdisevanam| shlte kAle, tathoShNe ca  
kaTukoShNAdisevanam||89||

viruddhamanale tadvadannapAnaM caturvidhe| madhusarpiH samadhRutaM mAtrayA  
tadvirudhyate||90||

kaTukoShNAdisAtmyasya svAdushItAdisevanam| yattat sAtmyaviruddhaM tu  
viruddhaM tvanilAdibhiH||91||

yA samAnaguNAbhyAsaviruddhAnnauShadhakriyA| saMskArato viruddhaM  
tadyadbhojyaM viShavadbhavet||92||

eraNDasIsakAsaktaM shikhimAMsaM yathaiva hi| viruddhaM vIryato j~jeyaM vIryataH  
shItalAtmakam||93||

tat saMyojoShNavIryeNa dravyeNa saha sevyate| krUrakoShThasya cAtyalpaM  
mandavIryamabhedanam||94||

mRudakoShThasya guru ca bhedanlyam tathA bahuḥ etat koShThaviruddhaM tu,  
viruddhaM syAdavasthayA||95||

shramavyavAyavyAyAmasaktasyAnilakopanam| nidrAlasasyAlasasya bhojanaM  
shleShmakopanam||96||

yaccAnutsRujya viNmUtraM bhu~gkte yashcAbubhukShitaH| tacca kramaviruddhaM  
syAdyaccAtikShudvashAnugaH||97||

parihAraviruddhaM tu varAhAdInniShevyा yat| sevetoShNaM ghRutAdIMshca pltvA  
shItaM niShevate||98||

viruddhaM pAkashcApi duShTadurdArusAdhitam|  
apakvataNDulAtyarthapakvadagdhaM ca yadbhavet| saMyogato viruddhaM  
tadyathA~amlAM payasA saha||99||

amanorucitaM yacca hRudviruddhaM taducyate| sampadviruddhaM  
tadvidyAdasa~jjAtarasaM tu yat||100||

atikrAntarasaM vA~api vipannarasameva vA| j~jeyaM vidhiviruddhaM tu bhujyate  
nibhRute na yat| tadevaMvidhamannaM syAdviruddhamupayojitam||101||

That, which is antagonistic with respect to place, time, agni, dose, suitability, dosha, processing, potency, bowels, health condition, order, contra-indication, indication, cooking, combination, palatability, richness (in properties), rules of eating, is considered unwholesome or unfit for human consumption.

If in an arid zone rough and sharp substances, and in marshy region unctuous and cold ones are used, those would be known to be antagonistic in terms of place.

Likewise, if one takes rough and cold food in the winter and pungent and hot articles in the summer, it is antagonistic in terms of time. Similar is the antagonism of food and drinks in four types of agni.

Honey and ghee taken together in equal quantity is antagonistic in terms of dose.

The use of sweet and cold substances by a person accustomed to pungent and hot is antagonism in terms of suitability.

Use of diet, drug and behaviour similar to dosha in properties but adverse to the person's practice is antagonistic to dosha.

When the edible becomes poisonous by particular processing such as in case of peacock's meat attached to castor stick (*eranda*), it is known to be antagonistic in terms of processing.

Antagonism in terms of potency is that when *sheeta veerya* and *ushna veerya* substances are taken in combination.

Antagonism in bowels is that when too little drug of mild potency with limited effectiveness in breaking hard mass is administered to persons suffering from hard bowels, and on the other hand, heavy, highly potent drug is administered to those suffering from soft bowel. When vata-vitiating substances are administered to persons

indulging in overwork, sexual intercourse and exercise while kapha-vitiating ones to those who oversleep or are lazy, it is an example of antagonism with respect to health conditions.

Antagonism in terms of order is that where one takes food before excreting feces and urine and without appetite or excessive hunger. If hot things are taken after intake of pork etc. or cold ones after intake of ghee etc. it is known as antagonism with respect to indication and contra-indication.

Antagonism in terms of cooking consists of cooking using damaged or bad fuel or if the grains are left uncooked, over-cooked or burnt. Sour things taken with milk is antagonism in terms of combination.

Antagonism in terms of palatability is taking of unlikeable things. Antagonism in terms of richness (of qualities) is that if there is immature, overmature or damaged rasa in a substance.

It is antagonism in terms of rules if the food is not taken in privacy. Food taken in the above way is known as antagonistic. [86-101]

#### *Diseases due to incompatibility*

षाण्ड्यान्दयवीसर्पदकोदराणां विस्फोटकोन्मादभगन्दराणाम्। मूर्च्छामदाधमानगलग्रहाणां  
पाण्डवामयस्यामविषस्य चैव॥१०२॥

किलासकुष्ठग्रहणीगदानां शोथाम्लपित्तज्वरपीनसानाम्। सन्तानदोषस्य तथैव मृत्योर्विरुद्धमन्नं  
प्रवदन्ति हेतुम्॥१०३॥

śāṇḍhyāndhyavīsarpadakōdarāṇāṁ visphoṭakōnmādabhagandarāṇāṁ|  
mūrcchāmadādhmānagalagrahāṇāṁ pāṇḍvāmayasyāmaviṣasya caiva||102||

kilāsakuṣṭhagrahanīgadānāṁ śōthāmlapittajvarapīnasānām | santānadōṣasya tathaiva  
mr̥tyōrviruddhamannaṁ pravadanti hētum||103||

shANDhyAndhyavIsarpadakodarANAM visphoTakonmAdabhagandarANAm|  
mUrcchAmadAdhmAnagalagrahANAM pANDvAmayasyAmaviShasya caiva||102||

kilAsakuShThagrahaNIgadAnAM shothAmlapittajvarapInasAnAm [68] |  
santAnadoShasya tathaiva mRutyorviruddhamannaM pravadanti hetum||103||

Antagonistic (*viruddha*) food is the cause of impotency, blindness, erysipelas, ascites, pustules, insanity, fistula-in-anus, fainting, narcosis, tympanitis, spasm in the throat, anaemia, *ama visha*, leucoderma, leprosy, *grahaniroga*, oedema, acid gastritis, fever, rhinitis, genetic disorders and even death. [102-103]

#### *Management of incompatibility*

एषां खल्वपरेषां च वैरोधिकनिमित्तानां व्याधीनामिमे भावः प्रतिकारा भवन्ति। तद्यथा- वमनं विरेचनं च,  
तद्विरोधिनां च द्रव्याणां संशमनार्थमुपयोगः, तथाविधैश्च द्रव्यैः पूर्वमभिसंस्कारः शरीरस्येति॥१०४॥

ēśāṁ khalvaparēśāṁ ca vairōdhikanimittānāṁ vyādhīnāmimē bhāvāḥ pratikārā bhavanti] tadyathā- vamanāṁ virēcanāṁ ca, tadvirōdhināṁ ca dravyāṇāṁ saṁśamanārthamupayōgaḥ, tathāvidhaiśca dravyaiḥ pūrvamabhisamskāraḥ śārīrasyēti||104||

eShAM khalvapareShAM ca vairodhikanimitAnAM vyAdhInAmime bhAvAH pratikArA [69] bhavanti] tadyathA- vamanAM virecanaM ca, tadvirodhinAM ca dravyANAM saMshamanArthamupayogaH, tathAvidhaishca dravyaiH pUrvamabhisamskaraH sharIrasyeti||104||

The measures which are used to counteract the above and other disorders caused by antagonistic food articles include emesis, purgation, use of antidotes for pacification and prior conditioning of the body with similar substances. [104]

भवतश्चात्र- विरुद्धाशनजान् रोगान् प्रतिहन्ति विवेचनम्| वमनं शमनं चैव पूर्वं वा हितसेवनम्||१०७||  
सात्म्यतोऽल्पतया वाऽपि दीप्ताग्नेस्तरुणस्य च| स्निग्धव्यायामबलिनां विरुद्धं वितथं भवेत्||१०६||

bhavataścātra- viruddhāśanajānrōgān pratihanti vivēcanam| vamanāṁ śamanaṁ caiva pūrvam vā hitasēvanam||105||

sātmyatō'lpatayā vā'pi dīptāgnēstaruṇasya ca| snigdhavyāyāmabalināṁ viruddham vitathāṁ bhavēt||106||

bhavatashtcAtra- viruddhAshanajAn [70] rogAn pratihanti vivecanam| vamanAM shamanAM caiva pUrvaM vA hitasevanam||105||

sAtmyato~alpatayA vA~api dlptAgnestarunasya ca| snigdhavyAyAmabalinAM viruddhaM vitathaM bhavet||106||

Purgation, emesis, pacification or prior use of wholesome substance alleviates the disorders caused by antagonistic (*viruddha*) food. Antagonism is neutralized by suitability, small quantity, strong digestive power, in young, and in persons having unction, physical exercise, and strength. [105-106]

## Summary

तत्र श्लोकाः-

मतिरासीन्महर्षीणां या या रसविनिश्चये| द्रव्याणि गुणकर्मभ्यां द्रव्यसङ्ख्या रसाश्रया||१०७||

कारणं रससङ्ख्याया रसानुरसलक्षणम्| परादीनां गुणानां च लक्षणानि पृथक्पृथक्||१०८||

पञ्चात्मकानां षट्ट्वं च रसानां येन हेतुना| ऊर्ध्वानुलोमभाजश्च यद्गुणातिशयाद्रसाः||१०९||

षणां रसानां षट्ट्वे च सविभक्ता विभक्तयः| उद्देशश्चापवादश्च द्रव्याणां गुणकर्मणि||११०||

प्रवरावरमध्यत्वं रसानां गौरवादिषु| पाकप्रभावयोर्लिङ्गं वीर्यसङ्ख्याविनिश्चयः||१११||

षणामास्वाद्यमानानां रसानां यत् स्वलक्षणम्| यद्यद्विरुद्ध्यते यस्माद्येन यत्कारि चैव यत्||११२||

वैरोधिकनिमित्तानां व्याधीनामौषधं च यत् आत्रेयभद्रकाप्यीये तत् सर्वमवदन्मुनिः॥११३॥

tatra ślōkāḥ- matirāśīnmaharṣīṇāṁ yā yā rasaviniścayē| dravyāṇi guṇakarmabhyāṁ dravyasaṅkhyā rasāśrayā||107||

kāraṇāṁ rasasaṅkhyāyā rasānurasalakṣaṇam| parādīnāṁ guṇānāṁ ca lakṣaṇāni pṛthakpṛthak||108||

pañcātmakānāṁ ṣaṭtvāṁ ca rasānāṁ yēna hētunā| ūrdhvānulōmabhājaśca yadguṇātiśayādrasāḥ||109||

ṣaṇṇāṁ rasānāṁ ṣaṭtvē ca savibhaktā vibhaktayah| uddēśāścāpavādaśca dravyānāṁ guṇakarmaṇi||110||

pravarāvaramadhyatvaṁ rasānāṁ gauravādiṣu| pākaprabhāvayōrliṅgarṁ vīryasaṅkhyāviniścayah||111||

ṣaṇṇāmāsvādyamānānāṁ rasānāṁ yat svalakṣaṇam| yadyadvirudhyatē yasmādyēna yatkāri caiva yat||112||

vairōdhikanimittānāṁ vyādhīnāmauśadham ca yat| ātrēyabhadrakāpyīyē tat sarvamavadanmuniḥ||113||

tatra shlokAH- matirAsInmaharShINAM yA yA rasavinishcaye| dravyANi guNakarmabhyAM dravyasa~gkhyA rasAshrayA||107||

kAraNaM rasasa~gkhyAyA rasAnurasalakShaNam| parAdInAM guNAnAM ca lakShaNaNi pRuthakpRuthak||108||

pa~jcAtmakAnAM ShaTtvAM ca rasAnAM yena hetunA| UrdhvAnulomabhAjashca yadguNAtishayAdrasAH||109||

ShaNNAM rasAnAM ShaTve ca savibhaktA [71] vibhaktayaH| uddeshashcApavAdashca dravyANAM guNakarmaNi||110||

pravarAvaramadhyatvaM rasAnAM gauravAdiShu| pAkaprabhAvayorli~ggaM vīryasa~gkhyAvinishcayaH||111||

ShaNNAmAsvAdyamAnAnAM rasAnAM yat svalakShaNam| yadyadvirudhyate yasmAdyena yatkAri caiva yat||112||

vairodhikanimittAnAM vyAdhInAmauShadhaM ca yat| AtreyabhadrakApylye tat sarvamavadanmuniH||113||

In summary, different views of the sages regarding *rasa*, drugs according to properties and actions, number of drugs according to *rasa*, argument in the number (six) of in six *rasa*, definition of *rasa* and *anurasa*, and definitions of *paradi gunas* separately, division of five *bhutas* in six *rasas*, preponderance of properties in up-moving and down-moving drugs, variations in combination of *rasas*, characters and exceptions in properties and actions of drugs (*rasas*), three degrees of *rasa* according to *guna* etc. definition of

*vipaka* and *prabhava*, decision about the number of *veerya*, characters of six *rasas*, the concept of antagonism (*viruddha*) as applicable to food and drugs, along with their effects and their treatment – all this has been described by the sage in the chapter of Atreya, Bhadrakapya etc. [107-113]

Thus, ends the twenty sixth chapter on Atreya Bhadrakapya etc. in Sutra Sthana in the treatise composed by Agnivesha and redacted by Charak. (26)

## Tattva Vimarsha(Fundamental Principles)

- *Rasa* (taste) of any substance is six in number, and the source element for the manifestation of all forms of tastes is jala mahabhuta.
- According to the science of Ayurveda, all matter (animate or inanimate) is made up of the five mahabhuta (five basic elements).
- The matter is the substratum of *rasa*.
- There is nothing in the world which does not have therapeutic value, and at the same time, everything cannot be used for the treatment of every disease.
- Drugs or diet abounding in the properties of given mahabhuta are useful in making good the deficiency of that mahabhuta in the body.
- A physician, well acquainted with the classification of *rasa* and *dosha*, seldom commits blunders in ascertaining the etiology, symptomatology, and treatment of diseases.
- Drugs and diets having particular taste cause disease and if administered with due care, they can also cure disease.
- General principles of drug action are described with the help of the attributes namely *rasa* (taste), *guna*(quality), *veerya* (potency/energy of molecules to produce action), *vipaka* (factor of metabolism) and *prabhava* (specific principle).
- The accomplishment of treatment is totally dependent on *paradi gunas* which are general attributes dealing with processing and prescribing of drugs Charak emphatically stated that without understanding the concept of *paradi guna*, a physician cannot be successful in curing the disease.
- *Rasa* helps not only in understanding the *panchabhautik* composition of drug/diet but also serves as a tool for identification of the rest of the principles of drug action like *veerya* and *vipaka*.
- Certain drugs may have the attributes (*veerya*, *vipaka*, etc.) and activities which are not in conformity with *rasa*. The substances having similar tastes may not produce similar activities.
- *Rasas* are categorized into superior, moderate and inferior basing on six *guna* like *ruksha*, *snigdha*, *ushna*, *sheeta*, *guru*, and *laghu*. *Vipaka* is classified similarly based on *rasa*.
- Assessment of principles of drug action is as follows “*Rasa* or taste of drugs and diets can be ascertained immediately after their contact with the tongue. Their *vipaka* can be ascertained by the action (in the form of aggravation of kapha etc.). Their *veerya* can be determined (between the stages of *rasa* and *vipaka*)

through their association with the body and or even immediately after coming into contact with the body. Among these, the *rasas* are the only attributes that can be perceived. The rest are inferred by actions only.

- *Vipaka* is the process of transformation (metabolism) of five mahabhuta.
- Inability to explain the rationality of drug action is attributed to a specific principle called *prabhava*, inherent in *dravya*.
- Unwholesome drugs and diet (*viruddha ahara*), dislodge the vitiated dosha but fail to expel them out of the body. Variant principles, like the place, time, digestive power, mode of preparation, combination (synergistic and antagonistic), etc. play a crucial role in making drug/diet as the unwholesome substance.
- Unwholesome diet is responsible for causation of production of *ama* and other conditions like sterility, mental disease, skin diseases, acid dyspepsia, fever, fetal disease (*santandosha*) and even death.

## Vidhi Vimarsha (Applied Inferences)

1. Assessment of panchamahabhuta in a substance can be carried out by taking into consideration, the most conspicuous characteristic of each mahabhuta. For example, gandha guna, rasa guna, rupaguna, sparsh guna and shabda guna are chief characteristics of Prithvi, jala, agni, vayu and akasha mahabhuta respectively. By these organ-specific methods, it becomes easy to assess the *panchbhutika* constitution of the substance. Rest of the guna given for each mahabhuta should be clinically evaluated.
2. The gustatory effect of the initial, as well as final contact of the drug either in the dry or wet state with the tongue, is known as *rasa* or taste. *Rasa* is the only principle of drug action which can be directly perceived (*pratyaksha gamya*). This is to be assessed in human volunteers by a single blind method with a performa consisting of chief characteristics of each *rasa*. As mentioned in Charak Samhita [Cha.Sa.Sutra Sthana 26/73-79] sugarcane, milk, and sugar candy are all said to be sweet, but there is an obvious difference in the taste of these substances. So, the intensity of each *rasa* can be assessed by taste threshold method. Electronic tongue if developed may help to validate the information about the intensity of *rasa*.
3. *Veerya* and *vipaka* are inferred through the activities or final effects (*karma*) produced by intake of drug/diet.
4. *Vipaka* is a pharmacokinetic principle, and its activities are referred at the level of *koshtha* (mutra and purisha), *dhatu(shukra)* and dosha. *Rasa* and *veerya* are pharmacodynamic principles. Assessment of *veerya* and *vipaka* are to be evaluated clinically.
5. The concept of *viruddhaahara* indicates the concepts of incompatibility and allergic reactions. For example, neither honey nor ghee is toxic to the body but if they both taken in equal quantity becomes unwholesome. A combination of it must be subjected to chemical analysis and pharmacological evaluation to assess the adverse effects.

6. Treatment of disease induced by *viruddhaahara* includes vamana, virechana, administration of antagonistic drugs and adaptation of prophylactic measures.
7. The concept of *prabhava* clearly indicates the principle which contributes to the specific activity of the drug and is inexplicable in nature. *Danti* root which acts as a purgative loses its effectiveness when soaked in water and administered. Observations indicate that *danti* has water soluble qualities that contribute to its ability to work as a purgative ref. Once the causative principle is identified, the activity of *danti* can be explained in a rational way, and it cannot be quoted as an example of *prabhava*. In the light of photochemical research, the explanation of drug action becomes rational and the *prabhava*, a specific principle can be deleted from the list of principles of drug action.

### **Practical application of rasa, veerya, vipaka and prabhava**

Let us examine the principles of Ayurvedic pharmacology in the light of modern science:

#### *Rasa*

Acharya Priya Vrat Sharma has discussed concept of *rasa* based on the physicochemical constitution of *dravyas* as follows: *madhura* (sugar, fat, and amino acids), *amla* (acids), *lavana* (salts), *katu* (essential oils, phenols), *tikta* (certain alkaloids and glycosides), and *kashaya* (tannins). According to his hypothesis, carbohydrates and proteins are present in *madhura rasa dravyas*; all the *amla rasa dravyas* show acidic properties and all the drugs in *lavana varga* contain sodium chloride (NaCl). All the *dravyas* of *katu varga* contain essential oils while half of all *katu dravyas* contain alkaloids or glycosides or phenols. All the *tikta dravyas* contain alkaloids, and only 10% of *dravyas* contain glycosides. Many of the *kashaya rasas* contain tannin<sup>276</sup>.

#### *Guna*

In recent years, some effort has been made to refine the objective parameters used for assessing *snigdha-ruksha* and *sheeta-ushna guna* by employing animal experimentation. Absolute evaluation of one *guna* is not possible in a living body since there are infinite factors related to each and every biological event. Metabolic study (dipana pachana experiment), intestinal secretion and motility test, and swimming stress test (swimming induced hypothermia) have been employed to assess the effects of various drugs having *snigdha-ruksha* and *sheeta-ushna guna*. *Sheeta* and *snigdha guna* drugs have shown an increase in body weight in metabolic experiments compared

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<sup>276</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

*toushna*" and ruksha guna drugs. Snigdha guna drugs alleviated stress-induced hypothermia whereas ruksha guna drugs aggravated it<sup>277 278</sup>

### *Veerya*

An attempt has been made to assess the effects of *sheetaa* and *ushna veerya* drugs (*samana pratyayarabdha dravyas*) on basal metabolic rate (BMR). Two *sheetaa veerya* drugs, namely, *yashtimadhu* (*Glycyrrhiza glabra*) and *shatavari* (*Asparagus racemosus*) and two *ushna veerya* drugs, namely, *chitraka* (*Plumbago zeylanica*) and *jatiphala* (*Myristica fragrans*) were considered for this study. In healthy volunteers, initial BMR was recorded with McKesson metabolizer. Then the drug was administered three times a day (*chitraka* and *jatiphala* 2gm each and *yashtimadhu* and *shatavari* 5gm each). A significant increase ( $p<0.05$ ) was observed with *yashti*, while the increase in BMR with *shatavari* was not very significant. *Chitraka* and *jatiphala* brought about a significant decrease in BMR( $p<0.05$ ). Therefore, *sheetaveerya* and *ushnaveerya* drugs which represent the *saumyatva* and *agneyatva* of a drug or food may be responsible for synthesizing or metabolizing the dhatu due to their *santarpaka* or *apatarpaka* actions<sup>279</sup>.

### *Vipaka*

An attempt has been made to assess vipaka of certain drugs by their effect on mala (feces and urine) and dosha (vata, pitta, and kapha). Drugs, namely *bala* and *shatavari* (*madhura vipaka*), *vrikshamla* and *amalaki* (*amla vipaka* and *madhura vipaka*), *maricha* and *pippali* (*katu vipaka* and *madhura vipaka*), *kushtha* and *nimba* (*katu vipaka*), and *Iodhra* and *ashoka* (*katu vipaka*) were taken up for the study. The study was done for six days. For the first two days, *kapardika bhasma* (250 mg., thrice a day) as placebo was administered and from the third day onwards the trial drug, in decoction form, (96 ml, twice a day) was given to healthy volunteers for two days. The remaining two days were used for following up. The influence of these drugs on dosha and mala were assessed using a structured proforma. Madhura and Amla vipaka drugs increased the quantity of urine and stool. Madhura vipaka drugs increased kapha dosha while Amla vipaka drugs

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<sup>277</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

<sup>278</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

<sup>279</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

increased pitta dosha. Katu vipaka drugs decreased the urine and stool output and increased vata dosha<sup>280</sup>.

### *Prabhava*

It is quite apparent that the *acharyas* formulated the hypothesis that explained the workings of drugs after observing various activities. In the context of the failure of the hypothetical principles to explain the drug action in a rational way, the concept of *prabhava* was formulated which may be interpreted as an empirical principle. Drugs with similar chemical structure should have similar actions. But it is not possible to predict the activity of a drug entirely by its chemical structure. Drugs with similar structures but having entirely different effects are known as isomers, for example, Antazoline and Tolazoline appear chemically similar but former is an antihistamine and the latter is an adrenergic blocking agent. Conversely, many dissimilar chemical agents have similar action, for example, phenobarbitone, chloralhydrate, and paraldehyde are all depressants of the central nervous system. The concept of *prabhava* may be interpreted using the concept of isomerism<sup>281</sup>.

## Current researches

### *Adverse effects of viruddha ahara (incompatible diet)*

Regular consumption of incompatible diet can induce inflammation at a molecular level, disturbing the eicosanoid pathway. It can create more arachidonic acid leading to increased prostaglandin-2 and thromboxane. This inflammatory effect is an important effect as these are all the basic pathologies that create Agni Mandya, Ama, and a number of metabolic disorders. Moreover, it can lead to epigenetic modifications. It includes food:food interactions, food processing interactions.<sup>282</sup>

Betel quid, which is a mixture of areca nut, betel leaf, slaked lime and tobacco is a perfect example of Samyoga Viruddha, It has been observed to produce carcinogenic effects.<sup>283</sup>

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<sup>280</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

<sup>281</sup> Sushruta. Uttara Tantra, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. Sushruta Samhita. 8th ed. Varanasi: Chaukhambha Orientalia;2005.

<sup>282</sup> Vaghbata. Uttara Sthana, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. Ashtanga Hridayam. 1st ed. Varanasi: Krishnadas Academy;2000.

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## Annapanavidhi Adhyaya

### Sutra Sthana Chapter 27. Classification and Regimen of food and beverages Abstract

Since food is considered as the source of life as well as cause of diseases, this chapter is dedicated to a discussion on various dietary preparations, including post-prandial drinks, their properties and beneficial effects on the body. The edibles and beverages have been classified into twelve categories by type: cereals, pulses, meat, green vegetables, fruits, green herbs, alcoholic beverages, water, milk and milk products, sweet products including honey, prepared items, and ahara upayogi (useful foods). The description also includes use of diet in specific disease conditions indicating its therapeutic use. The chapter encompasses various principles of digestion of food and beverages according to habitat, age, part used, processing method, its mixture. Agni (digestive capacity) of an individual is important for processing the food properly and achieving the desirable effects.

**Keywords:** *Annapana*, dietetics, classification of dietary articles, *anupana*, beverages, cereals, corns, vegetables, fruits, green herbs, sugar and sugar products, wines, meat, milk and milk products, water, cooked food.

### Introduction

Food is the most important source to achieve health and disease according to Ayurveda, and is even considered as a source of life as well as diseases. Wholesome diet is considered not just to be nourishing, but also to be therapeutic. It has also been given importance in other vedic texts. For instance, Maharshi Kashyapa considered food as *mahabheshaja* (great medicine) (Ka.S.Khil-4/5-6). However, there are some differences between *ahara* (food) and *bheshaja* (medicine) - the former is *rasa pradhana* (taste-centric) while the latter is *veerya pradhana* (potency centric).

The etymological meaning of *ahara* (food) is to collect (*ahiyyate*) for the nutritional purpose of the body. *Ahara* is a generic term that can mean *anna* (literally, cereals, but also mean solid food) and *pana* (beverages or anything drinkable). *Ahara* can be classified into twelve categories and should be balanced, consisting of carbohydrates, proteins, fats, salts, water, vitamins and essential micronutrients available from *shashtika* (rice), *shali* paddy, *mudga* (pulses), *ghrita* (clarified butter), *saindhava lavana* (rock salt), *antariksha* (rain water), *amalaki* (Indian gooseberry), *madhu* (honey) and *payas* (milk). According to Ayurveda, balanced diet besides nourishing the body, maintains the equilibrium of *doshas*, *dhatus* and *malas*. There are many substances in *shaka varga* (greens or green vegetables) that are used as diet and medicine, like *kakamachi* (*Solanum nigrum* Linn.), *patha* (*Cissampelos pareira* Linn.), *shatishaka* (*Hedychium spicatum* Buch-Ham), *changeri* (*Oxalis corniculata* Linn.), *shakuladani* (*Picrorhiza kurroa* Royle ex Benth.), *vrishapushpa* (*Adhatoda vasica* Nees), *gojihva* (*Launea asplenifolia* Hook.f.), *tilaparnika* (*Gynandropsis gynanndra* Linn.), *prapunnada*

(Cassia tora Linn.), *triparni* (Adiantum lunulatum Burm.), *parpatakam* (Fumaria vaillantti Loisel) etc.

*Phala Varga* (fruits articles); Following are not used because of non availability, *aingudam* (Balanites aegyptiaca Linn. Delile), *bibhitakam* (Terminalia bellerica Roxb.), *amlavetasa* (Hippophae rhamnoides sub sp. salicifolia), *karcurah* (Curcuma zedoaria Rosc.), *karanja* (Pongamia pinnata Pierre) as fruits.

## Sanskrit text, Transliteration and English Translation

अथातोऽन्नपानविधिमैयांव्याख्यास्यामः॥१॥

इति ह स्माह भगवानात्रेयः॥२॥

athātō'nnapānavidhimadhyāyāṁ vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAto&nnapAnavidhimadhyAyaM vyAKyAsyAmaH||1||

iti ha smAha BagvAnAtreyaH||2||

Now we shall expound the chapter “Annapanavidhi”(Classification and Regimen of food and beverages). Thus said Lord Atreya. [1-2]

### Effect of wholesome food

इष्टवर्णगन्धरसस्पर्शविधिविहितमन्नपानंप्राणिसञ्जकानांप्राणमाचक्षतेकुशलाः,  
प्रत्यक्षफलदर्शनात्; तदिन्धनाहयन्तरग्नेःस्थितिः; तत्सत्त्वमर्जयति,  
तच्छरीरधातुव्यूहबलवर्णन्द्रियप्रसादकरंयथोक्तमुपसेव्यमान्, विपरीतमहितायसम्पदयते॥३॥

iṣṭavarṇagandharasasparśām [1] vidhivihitamannapānaṁ prāṇināṁ prāṇisañjñakānāṁ  
prāṇamācakṣatē kuśalāḥ, pratyakṣaphaladarśanāt; tadindhanā hyantaragnēḥsthithiḥ; tat  
sattvamūrjayati, taccharīradhātuvyūhabalavarṇēndriyaprasādakaram  
yathōktamupasevyamānaṁ, viparītamahitāya sampadyatē||3||

iShTavarNagandharasasparSaM vidhivihitamannapAnaM prANinAM prANisajjakAnAM  
prANAmAcakShate kuSalAH, pratyakShaPaladarSanAt; tadindhanA hyantaragneH  
sthitiH; tat sattvamUrjayati, tacCarIradhAtuvyUhabalavarNendriyaprasAdakaraM  
yathoktampasevyamAnaM, viparItamahitAya sampadyate||3||

The wise and the learned believe that food and beverages that possess apt colour, smell, taste and touch, taken in the right quantity, at the right time, season and location, are a source of life and vitality for all living beings. This realization came through practical observation. Wholesome food (and a healthy lifestyle) is the fuel that maintains agni(digestion and metabolism process), invigorates the mind, promotes proper distribution of body elements, vitality, complexion, and acuity of the sense-organs. Conversely, unhealthy diet and lifestyle cause vitiation or imbalances in dosha, dhatu, and rasas, thus causing diseases. [3]

## Natural qualities

तस्मादधिताहितावबोधनार्थमन्नपानविधिमखिलेनोपदेक्ष्यामोऽग्निवेश! तत्स्वभावादुदक्तंक्लेदयति, लवणंविष्यन्दयति, क्षारःपाचयति, मधुसन्दधाति, सर्पिःस्नेहयति, क्षीरंजीवयति, मासबृहयति, रसःप्रीणयति, सराजर्जरीकरोति, शीधुरवधमति, द्राक्षासवोदीपयति, फाणितमाचिनोति, दधिशोफंजनयति, पिण्याकशाकंगलपयति, प्रभूतान्तर्मलोमाषसूपः, दृष्टिशुक्रधनःक्षारः, प्रायःपित्तलमन्नलमन्यत्रदाडिमामलकात्, प्रायःश्लेष्मलंमधुरमन्यत्रमधुनःपुराणाच्चशालिषष्टिकयवगोधूमात्, प्रायस्तिकंवातलमवृष्यचान्यत्रवेगाग्रामतापटोलपत्रात्, प्रायःकटुकंवातलमवृष्यचान्यत्रपिप्पलीविश्वभेषजात् ॥४॥

tasmāddhitāhitāvabōdhanārthamannapānavidhimakhilēnōpadēkṣyāmō'gnivēśa! [1] tat svabhāvādudaktarṁ klēdayati, lavaṇarṁ viṣyandayati, kṣārah pācayati, madhusandadhāti, sarpiḥ snēhayati, kṣīram jīvayati, māṁsaṁ bṛmhayati, rasah prīṇayati, surā jarjarīkaroti, śīdhuravadhamati, drākṣāsavō dīpayati, phāṇitamācinōti, dadhiśōpham janayati, piṇyākaśākam glapayati, prabhūtāntarmalō māśasūpaḥ, dṛṣṭiśukraghnah kṣārah, prāyah pittalamamlamanyatra dādimāmalakāt, prāyah ślēshmalarṁmadhuramanyatra madhunah purāṇācca sāliṣaṣṭikayavagōdhūmāt, prāyastikam vātalamaṁvṛṣyam cānyatra vēgāgrāmr̥tāpātōlapatrāt, prāyah kaṭukamvātalamaṁvṛṣyam cānyatra pippalīvīsvabhēṣajāt||4||

tasmAddhitAhitAvabodhanArthamannapAnavidhimaKilenopadekShyAmo&gniveSa! ( 'vidhimiti tattadviSiShTakarmanibandhanaM prakAram' iti SivadAsasenaH; ) tat svaBAvAdudaktaM kledayati, lavaNaM viShyandayati, kShAraH pAcayati, madhu sandadhAti, sarpiH snehayati, kShlraM jlvayati, mAMsaM bRuMhayati, rasaH prINayati, surA jarjarIkarioti, SIdhuravadhamati, drAkShAsavo dlpayati, PANitamAcinoti, dadhi SoPaM janayati, piNyAkaSAkaM glapayati, praBUtAntarmalo mAshaSUpaH, dRuShTiSukraGnaH kShAraH, prAyaH pittalamamlamanyatra dADimAmalakAt, prAyaH SieShmalaM madhuramanyatra madhunah purANAcca SAliShaShTikayavagodhUmAt, prAyastikaM vAtalamavRuShyaM cAnyatra vegAgrAmRutApaTolapatrAt, prAyaH kaTukaM vAtalamavRuShyaM cAnyatra pippallviSvaBeShajAt||4||

O Agnivesha! we shall, therefore, describe in full the science of diet and dietetics for the sake of knowledge of wholesome and unwholesome things.

By its very nature, water moistens, salt liquefies, alkali digests, honey synthesizes, ghee causes unctuousness, milk gives life, meat strengthens and has a restorative effect, soups of meat nourish. On the other hand, alcohol causes senility, *sidhu* wine causes emaciation, grape-wine stimulates digestion, treacle causes accumulation of *doshas*, curd causes swelling, and green *pinyaka* causes exhaustion.

The soup of black gram increases fecal output. Alkalies are injurious to vision and semen. All substances that are acidic in taste, except pomegranate and *amla* (embelic myrobalan) are mostly *pitta*-promoters. All substances of sweet taste, except honey, old *shali* rice, *shashtika*-rice, barley and wheat are generally *kapha*-promoters. All substances of bitter taste, except the sprouts of country willow, *guduchi*, and the wild

snake gourd are mostly *vata*-stimulants and anaphrodisiacs. All substances with pungent taste, except long pepper and ginger, are *vata* stimulants and aphrodisiacs. [4]

### Classification of food articles

परमतोवर्गसङ्ग्रहेणाहारद्रव्याण्यनुव्याख्यास्यामः ॥५॥

शूकधान्यशमीधान्यमांसशाकफलाश्रयान्। वर्गान्हरितमद्याम्बुगोरसेक्षुविकारिकान्॥६॥

दशद्वौचापरौवर्गौकृतान्नाहारयोगिनाम्। रसवीर्यविपाकैश्चप्रभावैश्चप्रचक्षमहे॥७॥

paramatō vargasahgrahēṇāhāradravyāṇyanuvyākhyāsyāmah [1] ||5||

śūkadadhānyaśamīdhānyamāṁsaśākaphalāśrayān| vargān  
haritamadyāmbugorāsēkṣuvikārikān||6||

daśa dvau cāparau vargau kṛtānnāhārayogaṁ| rasavīryavipākaiśca prabhāvaiśca  
pracakṣmahē||7||

paramato vargasā~ggraheNAhAradravyANyanuvyAKyAsyAmaH( ‘vargasamSrayeNa’ iti  
pA.; )||5||

SUkadadhanyaSamIdhAnyamAMsaSAkaPalASrayAn| vargAn  
haritamadyAmbugorasekShuvikArikAn||6||

daSa dvau cAparau vargau kRutAnnAhArayoginAm| rasavIryavipAkaiSca praBAvaiSca  
pracakShmahe||7||

We shall now expound the different classifications of the articles of diet.

Corn, pulse, meat, vegetable, fruits, greens, wines, water, milk and its products, sugarcane and its products: these ten and two more, cooked food and adjutant of foods. Of these, we shall now explain the taste, potency, post-digestive qualities and specific properties. [6-7]

#### *Class of corns*

अथशूकधान्यवर्गः-

रक्तशालिर्महाशालिःकलमःशकुनाहृतः

तूष्णको दीर्घशूकश्चगौरःपाण्डुकलाइगुलौ॥८॥

सुगन्धकोलोहवालःसारिवाख्यःप्रमोदकः।

पतङ्गस्तपनीयश्चयेचान्येशालयःशुभा:॥९॥

शीतारसेविपाकेचमधुराश्चाल्पमारुताः।

बद्धाल्पवर्चसःस्निग्धाबृंहणाःशुक्रमूत्रलाः॥१०॥

रक्तशालिर्वरस्तेषांतुष्णाधनस्त्रिमलापहः।

महांस्तस्यानुकलमस्तस्याप्यनुततःपरे॥११॥

यवकाहायनाःपांसुवाप्यनैषधकादयः ।

शालीनांशालयःकुर्वन्त्यनुकारंगुणागुणैः॥१२॥

atha śūkadadhānyavargah-

raktaśālirmahāśāliḥ kalamaḥ śakunāhṛitah [1] |

tūrnakō [2] dīrghaśūkaśca gauraḥ pāṇḍukalāṅgulau||8||

sugandhakō lōhavālaḥ sārivākhyah pramōdakah|

pataṅgastapanīyaśca yē cānyē śālayaḥ śubhāḥ||9||

śītā rasē vipākē ca madhurāścālpamārutāḥ|

baddhālpavarcasah snigdhā bṝmhaṇāḥ śukramūtralāḥ||10||

raktaśālirvarastēśāṁ tṛṣṇāghnastrimalāpahah [3] |

mahāṁstasyānu kalamastasyāpyanu tataḥ parē||11||

yavakā hāyanāḥ pāṁsuvāpyanaiśadhakādayah [4] |

śālīnāṁ śālayaḥ kurvantyanukāraṁ guṇāguṇaiḥ||12||

atha SUkadAnyavargaH-

raktaSAlirmahASAliH kalamaH SakunAhRutaH |

tUrNako dlrGaSUkaSca gauraH pANDukalA~ggulau||8||

sugandhako lohavAlaH sArivAKyaH pramodakaH|

pata~ggastapanlyaSca ye cAnye SAlayaH SuBAH||9||

SltA rase vipAke ca madhurAScAlpamArutAH|

baddhAlpavarcasaH snigdhA bRuMhaNAH SukramUtralAH||10||

raktaSAlirvarasteShAM tRuShNAGnastrimalApahaH |

mahAMstasyAnu kalamastasyApyanu tataH pare||11||

yavakA hAyanAH pAMsuvApyanaiShadhakAdayaH |

SAlInAM SAlayaH kurvantyanukAraM guNAguNaiH||12||

The general qualities and varieties of rice:

Red rice (*rakta shali*), big rice (*maha shali*), *kalamah*, *shakunahritah*, *turnaka*, *dirghashuka*, *gaurah*, *panduka*, *langulau*, *sugandhaka* (basmati rice), *lohavalah*, *sariva*,

*pramodakah, patanaga, tapaniya* and other varieties of “good” rice are cold in potency, sweet in taste (after digestion), mild vata-stimulant and can lead to constipation with less faecal output. They are unctuous, nourishing, seminiferous and diuretic. [8-10]

Of these, red rice is the best. It is adiposous and is effective in treating tridosha. The next best is the big rice and the next best is the *kalamah* and so on, in the order they are mentioned above. [11]

*Yavaka, hayana, pansu vanya* (deep-water paddy), *naishadhaka* and other kinds of rice are similar to the above mentioned types of rice regarding their good and bad qualities. [12]

The qualities of *shashtika* and *vrihi*

शीतःस्निग्धोऽगुरुःस्वादुस्त्रिदोषघ्नःस्थिरात्मकः।  
षष्ठिकःप्रवरोगौरःकृष्णगौरस्ततोऽनुच ॥१३॥  
वरकोद्दालकौचीनशारदोज्ज्वलदर्दुरा ।  
गन्धनाः कुरुविन्दाश्चषष्ठिकाल्पान्तरागुणैः ॥१४॥  
मधुरश्चाम्लपाकश्चव्रीहिःपित्तकरोगुरुः।  
बहुमूलपुरीषोष्मात्रिदोषस्त्वेवपाटलः ॥१५॥  
śītah snigdhō'guruḥ svādustridōṣaghnaḥ sthirātmakah|  
ṣaṣṭikah pravarō gaurah kṛṣṇagaurastatō'nu ca||13||  
varakōddālakau cīnaśāradōjjvaladardurāḥ|  
gandhanāḥ kuruvindāśca ṣaṣṭikālpāntarā guṇaiḥ||14||  
madhuraścāmlapākaśca vrīhiḥ pittakarō guruḥ|  
bahumūtrapurīśōsmā tridōṣastvēva pāṭalah||15||  
SItaH snigdho&guruH svAdustridoShaGnaH sthirAtmakaH|  
ShaShTikaH pravaro gauraH kRuShNagaurastato&nu ca||13||  
varakoddAlakau clnaSAradojjvaladardurAH|  
gandhanAH kuruvindASca ShaShTikAlpAntarA guNaiH||14||  
madhuraScAmlapAkaSca vrIhiH pittakaro guruH|  
bahumUtrapuriShoShmA tridoShastveva pATalaH||15||

*Shashtika* rice is cold in potency, unctuous, not heavy, and sweet. It pacifies the three dosha and stabilizes them. The white variety is the best type of *shashtika* rice and the dark-white comes next in order [13] *Varaka* (*Chinaka-* *Panicum miliaceum Linn*),

*uddalaka* (*Vanakodrava*- *Paspalum scrobiculatum* var. *sommeronii* Stapf.), *china*, *sharada*, *ujjvala*, *dardura*, the fragrant rice (*gandhana*), and *kuruvinda* are slightly different in quality from the *shashtika* rice. [14]

*Vrihi* rice is sweet in taste and acidic after digestion, stimulates pitta and is heavy. The *patala* grain causes excessive urination and defecation, enhances body heat and also increases tridosha. [15]

#### The qualities of *koradusha*, *shyamaka* and other grains

सकोरदूषःश्यामाकःकषायमधुरोलघुः। वातलःकफपित्तधनःशीतःसङ्ग्राहिशोषणः ॥१६॥

हस्तिश्यामाकनीवारतोयपर्णिगवेधुकाः। प्रशान्तिकाम्भःश्यामाकलौहित्याणुप्रियङ्गवः ॥१७॥

मुकुन्दोऽङ्गिणिटगर्मटी वरुकावरकास्तथा। शिबिरोत्कटजूर्णाहवाःश्यामाकसदृशागुणैः ॥१८॥

sakōradūṣah śyāmākah kaśāyamadhurō laghuḥ| vātalah kaphapittaghnah sītah  
saṅgrāhiśōṣaṇah||16||

hastiśyāmākanīvāratōyaparṇīgavēdhukāḥ|  
praśāntikāmbhaḥśyāmākalauhityānupriyaṅgavah [1] ||17||

mukundō jhīṇṭigarmūṭī [2] varukā varakāstathā| śibirōtkaṭajūrṇāhvāḥ śyāmākasadrśā  
guṇaiḥ||18||

sakoradUShaN SyAmAkaH kaShAyamadhuro laGuH| vAtalaH kaPapittaGnaH SItaH  
sa~ggrAhiSoShaNaH||16||

hastiSyAmAkanlvAratoyaparNlgavedhukAH|  
praSAntikAmBaHSyAmAkalauhityANupriya~ggavaH ||17||

mukundo JlNTigarmUTI varukA varakAstathA| SibirotkTaTajUrNAhvAH  
SyAmAkasadRuSA guNaiH||18||

*Koradusha*, or *sanwa* millet (*Paspalum scrobiculatum* var. *sommeronii* Stapf) and *shyamaka* or common millet (*Echinochloa frumentacea* Link) are astringents and sweet in taste, light, vata-stimulant kapha and pitta diminishing, and desiccants.

*Hasti-shyamaka* (*Echinochloa crus galli-* (Linn.) Beauv), *nivara* (*Hygroryza aristata* Nees), *toyaparni*, *gavedhuka* (*Coix lacryma-Jobi* Linn.), *prasantika*, *ambhyashyamaka*, *lauhitya*, *anu*, Italian millet (*Setaria italica* Linn. Beauv), *mukunda*, *jhinti*, *garmuti*, *varuka* (*Sorghum halepense* Linn.), *varaka* (*shyambeeja*), *shibira*, *utkata* and great millet (*Sorghum vulgare* (Linn.) Pers.) have similar qualitites as that of *shyamaka*. [16-18]

#### The qualities of barley and bamboo

रुक्षःशीतोऽगुरुःस्वादुर्बहुवातशकृद्यवः।  
स्थैर्यकृत्सकषायश्च बल्यःश्लेष्मविकारनुत् ॥१९॥

रुक्षःकषायानुरसोमधुरःकफपित्तहा।

मेदःक्रिमिविषघ्नश्चबल्योवेणुयवोमतः ॥२०॥  
 rūkṣah śītō'guruḥ svādurbahuvātaśakṛdyavah|  
 sthairyakṛt sakaśāyaśca [1] balyah ślēśmavikāranut||19||  
 rūkṣah kaśāyānurasō madhuraḥ kaphapittahā|  
 mēdaḥkrimiviṣaghnaśca balyō vēṇuyavō mataḥ||20||  
 rUkShaH SIto&guruH svAdurbahuvAtaSakRudyavaH|  
 sthairyakRut sakaShAyaSca balyaH SleShmavikAranut||19||  
 rUkShaH kaShAyAnuraso madhuraH kaPapittahA|  
 medaHkrimiviShaGnaSca balyo veNuyavo mataH||20||

Barley (*Hordeum vulgare Linn.*) is dry, cold in potency, not heavy, sweet in taste, increases excessively vata and feces, stabilizes, is astringent in action, promotive of strength and is effective in treating the discordance of kapha.

The bamboo is considered to be dry, astringent (*kashaya anurasa*), sweet, and is effective in treating kapha and pitta. It removes fat, worms and poison and is strengthening. [19-20]

#### The properties of wheat

सन्धानकृद्वातहरोगोधूमःस्वादुशीतलः।  
 जीवनोबृंहणोवृष्यःस्निग्धःस्थैर्यकरोगुरुः॥२१॥  
 नान्दीमुखीमधूलीचमधुरस्निग्धशीतले।  
 इत्ययंशूकधान्यानांपूर्ववर्गःसमाप्यते॥२२॥  
 इतिशूकधान्यवर्गःप्रथमः॥१॥  
 sandhānakṛdvātaharō gōdhūmaḥ svāduśītalah|  
 jīvanō bṛṁhaṇō vr̄ṣyah snigdhaḥ sthairyakarō guruḥ||21||  
 nāndīmukhī madhūlī ca madhurasnigdhaśītalē|  
 ityayam śūkadhbānyānāṁ pūrvō vargaḥ samāpyatē||22||  
 iti śūkadhbānyavargaḥ prathamah||1||  
 sandhAnakRudvAtaharo godhUmaH svAduSItalahH|  
 jlvanO bRuMhaNo vRuShyaH snigdhaH sthairyakaro guruH||21||  
 nAndImuKI madhUll ca madhurasnigdhaSItale|

ityayaM SUkadhbAnyAnAM pUrvo vargaH samApyate||22||

iti SUkadhbAnyavargaH prathamaH||1||

Wheat (*Triticum aestivum Linnaeus*) alleviates morbid vata, sweet, cold in potency, vitalizing, nourishing, aphrodisiac, unctuous, stabilizing and heavy. [21]

*Nandimukhi* (crowfoot grass) and *madhuli* (*Eleusine coracana Gaerin*) corn are sweet, unctuous and cold in potency. Thus, ends the first section on monocotyledons. [22]

### *The class of pulses(di-cotyledons)*

अथशमीधान्यवर्गः-

कषायमधुरोरुक्षःशीतःपाकेकटुर्लघुः।

विशदः श्लेष्मपित्तघ्नोमुदगःसूप्योत्तमोमतः॥२३॥

वृष्यःपरंवातहरःस्निग्धोष्णोमधुरोगुरुः।

बल्योबहुमलःपुंस्त्वंमाषःशीघ्रंदातिच॥२४॥

राजमाषः सरोरुच्यःकफशुक्राम्लपितनुत्।

तत्स्वादुर्वातलोरुक्षःकषायोविशदोगुरुः॥२५॥

उष्णाःकषायाःपाकेऽम्लाःकफशुक्रानिलापहाः।

कुलत्थाग्राहिणःकासहिककाशवासार्शसांहिताः॥२६॥

मधुरामधुराःपाकेग्राहिणोरुक्षशीतलाः।

मकुष्ठकाःप्रशस्यन्तेरक्तपितज्वरादिषु॥२७॥

चणकाश्चमसूराश्चखण्डिकाःसहरेणवः।

लघवःशीतमधुराःसकषायाविरुक्षणाः॥२८॥

पित्तश्लेष्मणिश्यन्तेसूपेष्वालेपनेषुच।

तेषांमसूरःसङ्ग्राहीकलायोवातलःपरम्॥२९॥

स्निग्धोष्णोमधुरस्तिक्तःकषायःकटुकस्तिलः।

त्वच्यःकेश्यश्चबल्यश्चवातघ्नःकफपितकृत्॥३०॥

मधुराःशीतलागुर्व्योबलघ्न्योरुक्षणात्मिका�।

सस्नेहाबलिभिर्भौज्याविविधाःशिम्बिजातयः॥३१॥

शिम्बीरुक्षाकषायाचकोष्ठेवातप्रकोपिनी।

नचवृष्यानचक्षुष्याविष्टभ्यचविपच्यत॥३२॥

आढकीकफितच्छनीवातला, कफवातनुत्।  
अवलगुजःसैडगजो, निष्पावावातपितला: ||३३||

काकाण्डोमा(ला)न्मगुप्तानंमाषवत्फलमादिशेत्।  
द्वितीयोऽयंशमीधान्यवर्गःप्रोक्तोमहर्षिणा ||३४||

इतिशमीधान्यवर्गद्वितीयः ||२||

atha śamīdhānyavargah-

kaśāyamadhuरō rūkṣah śītaḥ pākē kaṭurlaghuḥ|  
viśadaḥ [1] ślēśmapittaghnō mudgaḥ sūpyōttamō mataḥ||२३||

vṛṣyah param vātaharaḥ snigdhōṣṇō madhuरō guruḥ|  
balyō bahumalaḥ puṁstvarṁ māṣah śīghram dadāti ca||२४||

rājamāṣah [2] sarō rucyah kaphaśukrāmlapittanut|  
tatśvādurvātalō rūkṣah kaśāyō viśadō guruḥ||२५||

uṣṇāḥ kaśāyāḥ pākē’mlāḥ kaphaśukrānilāpahāḥ|  
kulatthā grāhiṇāḥ kāsahikkāśvāsārśasāṁ hitāḥ||२६||

madhuरā madhuरāḥ pākē grāhiṇō rūkṣaśītalāḥ|  
makuṣṭhakāḥ praśasyantē raktaपittajvarādiṣu||२७||

caṇakāśca masūrāśca khaṇḍikāḥ saharēṇavah|  
laghavaḥ śītamadhuरāḥ sakaśāyā virūkṣaṇāḥ||२८||

pittaślēṣmaṇi śasyantē sūpēśvālēpanēṣu ca|  
tēśāṁ masūraḥ saṅgrāhī kalāyō vātalāḥ param||२९||

snigdhōṣṇō madhurastiktaḥ kaśāyah kaṭukastilah|  
tvacyah kēśyaśca balyaśca vātaghnah kaphapittakṛt||३०||

madhuरāḥ śītalā gurvyō balaghnyō rūkṣaṇātmikāḥ|  
sasnēhā balibhirbhōjyā vividhāḥ śimbijātayah||३१||

śimbī rūkṣā kaśāyā ca kōṣṭhē vātaprakōpinī|  
na ca vṛṣyā na cakṣuṣyā viṣṭabhya ca vipacyatē||३२||

āḍhakī kaphapittaghnī vātalā, kaphavātanut|  
avalgujaḥ saiḍagajō, niṣpāvā vātapittalāḥ||३३||

kākāñdōmā(lā)tmaguptānāṁ māśavat phalamādiśēt|  
dvitīyō'yaṁ śamīdhānyavargah prōktō maharṣinā||34||  
iti śamīdhānyavargō dvitīyah ||2||  
atha SamldhAnyavargaH-  
kaShAyamadhuro rUkShaH SItaH pAke kaTurlaGuH|  
viSadaH SleShmapittaGno mudgaH sUpyottamo mataH||23||  
vRuShyaH paraM vAtaharaH snigdhoShNo madhuro guruH|  
balyo bahumalaH puMstvaM mAshaH SIGraM dadAti ca||24||  
rAjamaShaH saro rucyaH kaPaSukrAmlapittanut|  
tatSVAdurvAtalo rUkShaH kaShAyo viSado guruH||25||  
uShNAH kaShAyAH pAke&mIAH kaPaSukrAnilApahAH|  
kulatthA grAhinaH kAsahikkASvAsArSasAM hitAH||26||  
madhurA madhurAH pAke grAhino rUkShaSItaIAH|  
makuShThakAH praSasyante raktapittajvarAdiShu||27||  
caNakASca masUrASca KaNDikAH sahareNavaH|  
laGavaH SItamadhurAH sakaShAyA virUkShaNAH||28||  
pittaSleShmaNi Sasyante sUpeshvAlepaneShu ca|  
teShAM masUraH sa~ggrAhI kalAyo vAtalaH param||29||  
snigdhoShNo madhurastiktaH kaShAyaH kaTukastilaH|  
tvacyaH keSyaSca balyaSca vAtaGnaH kaPapittakRut||30||  
madhurAH SItaIA gurvo balaGnyo rUkShaNAtmikAH|  
sasnehA baliBirBojyA vividhAH SimbijAtayaH||31||  
Simbl rUkShA kaShAyA ca koShThe vAtaprakopin||  
na ca vRuShyA na cakShuShyA viShTaBya ca vipacyata|||32||  
ADhakI kaPapittaGnI vAtaIA, kaPavAtanut|  
avalgujaH saiDagajo, niShpAvA vAtapittalAH||33||  
kAkANDomA(IA)tmaguptAnAM mAshaVat PalamAdiSet|  
dvitlyo&yaM SamldhAnyavargaH prokto maharShiNA||34||

iti SamIdhAnyavargo dvitlyaH||2||

#### Qualities of green gram (*Vigna radiata* Linn. Wilczec)

Now begins the section on pulses (di-cotyledons). Green-gram (*mudga*) is considered the best of pulses. It is astringent and sweet in taste, dry, cold in potency, pungent (after digestion), and light. It alleviates the vitiated kapha and pitta. [23]

The qualities of black gram (*Vigna mungo* Linn. Hepper syn. *Phaseolus mungo*): Black gram is an excellent aphrodisiac, effective in treating vata, unctuous, hot, sweet, heavy (to digest) and strength promoting. It also increases fecal volume. [24]

#### Qualities of the black eye-pea (*Vigna unguiculata* Linn. Walp)

Black eye-pea is a relishing variant of dicotyledon that has laxative and alleviating properties against disorders of kapha shukra and acid-dyspepsia. It is sweet in taste like black gram, vata-stimulant, dry, (works as an) astringent, cleaning (action) and is heavy to digest. [25]

#### Qualities of the horse-gram (*Dolichos biflorus* Linn.)

Horse-gram (*Dolichos biflorus* Linn.) is hot, astringent in taste, acidic (on digestion) and alleviates disorders of kapha shukra and vata. It is beneficial in cough, hiccup, dyspepsia and piles. [26]

#### Qualities of the moth-gram (*Vigna aconitifolia* (Jacq.) Marechal)

The moth-gram (*Vigna aconitifolia* (Jacq.)) is sweet in taste and on digestion, astringent in action, with dry property and cold in potency. It is recommended in *raktapitta*, in fevers and in similar conditions. [27]

#### General qualities of chickpea, lentil, vetchling and common pea

Chick-pea (*Cicer arietinum* Linn), lentils (*Lens culinaris* Medic.), vetchling (*Lathyrus sativus* Linn.), and common pea (*Pisum sativum* sub sp. *sativum*, Co. ver speciosum Dierb. Alef) are light, cold in potency, sweet, astringent in taste and strongly dehydrating. [28]

They are recommended in pitta and kapha conditions and in preparation of nourishing soups and ointments. Amongst these two, the lentil is astringent in action while the vetchling excessively stimulate vata. [29]

#### Qualities of *tila* (*Sesamum indicum* Linn)

*Tila* (*Sesamum indicum* Linn) is unctuous, hot, sweet, bitter and astringent. It is conducive to the growth of skin and hair, boosts strength and is effective in treating vata while causing kapha and pitta. [30]

## Qualities of the legumes

All varieties of legumes are sweet, cold in potency, heavy, destructive of strength, and dehydrating. They should be taken only by strong persons and in conjunction with unctuous articles. [31]

The *shimbi jataya* (variety of legumes) is dry, astringent in taste, provokes vata in the abdomen and is an anaphrodisiac. It also, is not good for the eye and causes slow and irregular digestion. [32]

Pigeon-pea (Cajanus cajan Linn. Mill Sp) is useful in curing kapha and pitta and stimulates vata, while *avalguja* (bakuchi seeds, Psoralea corylifolia Linn.) seeds and the seeds of *edagaja* (wild senna, Cassia tora Linn) are effective in curing kapha and vata. The lablab (Dolichos lablab Linn. Var. typicus Prain.) stimulates vata and pitta. [33]

Sword bean (Mucuna monosperma DC), linseed (Linum usitatissimum Linn) and cowage (Mucuna pruriens Hook) can be considered similar in effect to black gram. [34]

Thus, the second group of pulses i.e. dicotyledons, expounded by the learned sage.

## *Class of mamsa (meat)*

अथमांसवर्गः-

गोखराश्वतरोष्ट्राश्वद् वीपिसिंहक्षवानराः।  
वृकोव्याघस्तरक्षुश्चबभ्रुमार्जारमूषिकाः॥३५॥  
लोपाकोजम्बुकः श्येनोवान्तादश्चाषवायसौ।  
शशधनीमधुहाभासोगृद्धोलूककुलिङ्गकाः॥३६॥  
धूमिकाकुररश्चेतिप्रसहामृगपक्षिणः।

atha māṁsavargah-

gōkharāśvataroṣṭrāśvadvīpiśimharkṣavānarāḥ।  
vr̥kō vyāghrastarakṣuśca babhrumārjāramūṣikāḥ॥३५॥  
lōpākō jambukāḥ śyēnō vāntādaścāṣavāyasau|  
śaśaghnī madhuhā bhāsō gr̥dhrōlūkakuliṅgakāḥ॥३६॥  
dhūmikā kuraraścēti prasahā mrgapakṣināḥ॥३७॥  
atha mAMsavargaH-  
goKarASvataroShTrASvadvIpisiMharkShavAnarAH|  
vRuko vyAGrastarakShuSca baBrumArjAramUShikAH||35||  
lopAko jambukaH Syeno vAntAdaScASHavAyasau|

SaSaGnI madhuhA BAso gRudhrolUkakuli~ggakAH||36||

dhUmikA kuraraSceti prasahA mRugapakShiNaH|

Listed now are the “tearer” beasts (i.e., beasts that can rend/tear with their horns/jaws/horns) that are sources of *meat* fit for human consumption : the cow (Bos taurus), the ass (Asinus equidae), the mule, the camel (Camelus dromedarius), the horse (Equus caballus), the panther (Felis pardus), the lion (Felis leo), the bear (Melusus labiatus), the monkey (Semnopithecus sp), the wolf (Canis lupus), the tiger (Felis tigris), the hyena (Hyaena striata), the large brown mongoose (Herpestes mungo), the cat (Felis domesticus), the mouse (Mus musculus), the fox (Vulpus bengalensis), the jackal (Canis aureus), the hawk (Accipiter gentilis), the dog (Canis familiaris), the blue jay (Cyanocitta cristata), the crow (Corvus splendens), the golden eagle (Aquila chrysaetos), the honey buzzard (Pernis apivorus), the bearded vulture (Gypetus barbatus), the vulture (Vulture monachus), the Indian horned owl (Bubo bengalensis), the sparrow hawk (Ploceus bengalensis), the owlet (Athene brama), and the fish-eagle (Pandion haliaetus).[35-36]

श्वेतःश्यामश्चित्रपृष्ठःकालकःकाकुलीमृगः ॥३७॥

कूर्चिकाचिल्लटोभेकोगोधाशल्लकगण्डकौ।

कदलीनकुलःश्वाविदितिभूमिशयाःस्मृताः ॥३८॥

śvētaḥ śyāmaścitrapr̥ṣṭhaḥ kālakah kākulīmṛgah||37||

kūrcikā cillaṭō bhēkō gōdhā śallakagaṇḍakau|

kadalī nakulaḥ śvāviditi bhūmiśayāḥ smṛtāḥ||38||

SvetaH SyAmaScitrapRuShThaH kAlakaH kAkullmRugaH||37||

kUrcikA cillaTo Beko godhA SallakagaNDakau|

kadall nakulaH SvAviditi BUmiSayAH smRutAH||38||

And listed now are the burrowing creatures that can be considered fit for human consumption:

The white (Python molurus), the dark-brown (Python molurus), the reticulated (Python reticulus) and the black (Python molurus) ones are the four varieties of pythons; and the hedgehog (Erinaceus europaeus), musk shrew (Neomys fodiens), frog (Rana sp), iguana lizard (Iguanidae), pangolin (Manis pentadactyla), gecko lizard (Gekkonidae), marmot (Marmota), mongoose (Herpestes mungo), and porcupine (Acanthion leucura). [37-38]

सृमरश्चमरःखड्गोमहिषोगवयोगजः।

न्यङ्कुर्वराहश्चानूपामृगाःसर्वरुस्तथा ॥३९॥

srmaraścamaraḥ khaṅgō mahisō gavayō gajah|  
nyaṅkurvarāhaścānūpā mrgāḥ sarvē rurustathā||39||  
sRumaraScamaraH Ka~ggo mahiSho gavayo gajaH|  
nya~gkurvarAhaScAnUpA mRugAH sarve rurustathA||39||

Wetland or marshy animals that are fit for consumption are:

The wild boar (*Sus cristatus*), the yak (*Poephagus grumnicus*), the rhinoceros (*Rhinoceros unicornis*), the buffalo (*Bos bubalus*), the *gaya* ox (*Bos frontalis*), the elephant (*Elaphus indicus*), the antelope, the hog (*Cervus porcinus*) and the swamp deer (*Rucervus durancellii*) [39]

कूर्मःकर्कटकोमत्स्यःशिशुमारस्तिमिङ्गिलः।

शुक्तिशङ्खोद्रकुम्मीरचुलुकीमकरादयः॥४०॥

इतिवारिशया·प्रोक्ता...

kūrmaḥ karkatākō matsyah śiśumārastimiṅgilah|

śuktisaṅkhōdrakummīraculukīmakarādayah||40||

iti vāriśayāḥ prōktā...|41|

kUrmaH karkaTako matsyaH SiSumArastimi~ggilaH|

SukiSa~gKodrakummlraculuklmakarAdayaH||40||

iti vAriSayAH proktA...

Acquatic animals fit for human consumption are:

The tortoise (*Chelonia*), the crab (*Brachyura*), the fish (*Pisces*), the estuarine crocodile, the whale (*Cetacea*), the pearl oyster (*Margaritifera*), the snails (*Gastropoda*), the cat-fish, the gangetic *garial* (*Crocodylus porosus*), the sus or gangetic dolphin (*Delphinus gangetica*) and the *magar* (*Neomeris phocaenoides*), the great Indian crocodile (Sea monster) —these are the aquatic animals (in the group of edible meat) [40]

वक्ष्यन्तेवारिचारिणः।

हंसःक्रौञ्चोबलाकाचबकःकारण्डवःप्लवः॥४१॥

शरारिःपुष्कराह्वश्चकेशरीमणितुण्डकः।

मृणालकण्ठोमदगुश्चकादम्बःकाकतुण्डकः॥४२॥

उत्क्रोशःपुण्डरीकाक्षोमेघरावोम्बकुक्कुटी।

आरानन्दीमुखीवाटीसुमुखाःसहचारिणः॥४३॥

रोहिणीकामकालीचसारसोरक्तशीर्षकः।

चक्रवाकस्तथाऽन्येचखगाःसन्त्यम्बुचारिणः॥४४॥

...vakṣyantē vāricāriṇah̄|

haṁsaḥ krauñcō balākā ca bakaḥ kāraṇḍavaḥ plavah||41||

śarāriḥ puṣkarāhvāśca kēśarī maṇitunḍakah̄ [1] |

mṛṇālakanṭhō madguśca kādambah̄ kākatuṇḍakah̄||42||

utkrōśah̄ puṇḍarīkākṣō mēgharāvō’mbakukkuṭī|

ārā nandīmukhī vāṭī sumukhāḥ sahacāriṇah̄||43||

rōhiṇī kāmakālī ca sārasō raktaśīrṣakah̄|

cakravākastathā’nyē ca khagāḥ santyambucāriṇah̄||44||

...vakShyante vAricAriNaH|

haMsaH krau~jco balAkA ca bakaH kAraNDavaH plavaH||41||

SarAriH puShkarAhvaSca keSarl maNituNDakaH |

mRuNALakaNTho madguSca kAdambaH kAkatuNDakaH||42||

utkroSaH puNDarIkAkSho meGarAvo&mbakukkuTī|

ArA nandImuKI vATI sumuKAH sahacAriNaH||43||

rohiNI kAmakAll ca sAraso raktaSIrShakaH|

cakravAkastathA&nye ca KagAH santyambucAriNaH||44||

The following are the aquatic creatures that are fit for human consumption:

The swan (*Cygnus olor*), the demoiselle crane (*Anthropoides virgo*), crane(*balaka*, *Ardea nivea*), the goliath heron (*ardea goliath*), the goose (*Anser albifrons*), the pelican (*Pelicanus onocrotalus*), the skimmer or scissor bill (*Rynchops*), the lily trotter (*Ardea sibirica*), the curlew (*keshari*, *Oedicnemus crepitans*), the oyster-catcher (*Haematopus ostralegus*), the snake-bird (*Mrinalakantha*, *Plotus anhinga*), the little cormorant (*madgu*, *Phalacrocorax pygmeus*), greylag goose (*kadamba*, *anser anser*), the common river tern (*Kakatundaka*, *Sterna hirundo*), mallard(*utkosha*, *Anas platyrhynchos*), the white-eyed pochard (*Pundarikaksha*, *Nyroca ferina*), the trumpeter swan (*megharava*, *Cygnus buccinator*), the moorhen (*ambukukuti*, *Gallinula chloropus*), the cobbler’s owl bird or avocet (*ara*, *Recurvirostra avosetta*), the flamingo (*nandimukha*, *Phoenicopterus roseus*), the little grebe (*vati*, *Podiceps ruficollis*) or the laughing gull (*Sumukha*, *Anas galericulata*), petrel (*Sahacharin*, *Oceanitidae*), common teal (*rohini*, *Anas crecca*), tropic bird (*Kamakali*, *Phaethon rubricauda*), Indian crane (*sarasa*, *Megalornis grus*), the

purple heron (*raktashirshaka*, *Ardea purpurea*), and the ruddy shel-duck(*Chakravaka*, *Anas* sp.) [41-44]

पृष्ठःशरभोरामःशवदंष्ट्रोमृगमातृका।  
शशोरणौकुरङ्गश्चगोकर्णःकोट्टकारकः॥४५॥  
चारुष्कोहरिणौचशम्बरःकालपुच्छकः।  
ऋष्यश्चवरपोतश्चविज्ञेयाजाङ्गलामृगाः॥४६॥  
pr̥ṣataḥ śarabhō rāmaḥ śvadamṣṭrō mṛgamātrkā|  
śaśōraṇau kuraṅgaśca gōkarṇaḥ kōṭṭakārakah||45||  
cāruṣkō hariṇaiṇau ca śambaraḥ kālapucchakah|  
ṛṣyaśca varapōtaśca vijñēyā jāṅgalā mṛgāḥ||46||  
pRuShataH SarabBo rAmaH SvadaMShTro mRugamAtRukA|  
SaSoraNau kura~ggaSca gokarNaH koTTakArakaH||45||  
cAruShko hariNaiNau ca SambaraH kAlapucCakaH|  
RuShyaSca varapotaSca vij~jeyA jA~ggalA mRugAH||46||

Some of the wild antelopes (or *jangala* animals) that are fit for human consumption are:

The *chital* or spotted deer(*prisata*, *Cervus axis*), the elk or wapiti (*sharabha*, *Cervus canadensis*), kashmir red deer (*rama*, *Cervus elaphus*), the mouse deer (*Shadamshtra*, *Tragulus meminna*), red deer (*mrigamatrika*, *Cervus elaphus*), the hare or rabbit (*shasha*, *Leporidae*), the oorial or wild sheep(*urana*, *Ovis vignei*), the Indian antelope (*kuranga*, *Antilope cervicapra*), the cow-eared deer (*gokarna* , *Antelope picta*), the Indian *muntjak* or barking deer (*kottakaraka*, *Cervus muntjae*), the gazelle (*charushka*, *Gazelle bennetti*), the black or Indian antelope(*Harina*, *Antilope cervicapra*), fawn deer (*ena*, *Cervus rusa*), the Indian sambhar (*sambhara*, *Cervus unicolor*), the black-tailed deer (*kalapucchaka*, *odocoilus*), the musk deer and the small antelope (*varapota*, *Antilope cervicapra*).[45-46]

लावोवर्तीरकश्चैववार्तीकःसकपिञ्जलः।  
चकोरश्चोपचक्रश्चकुकुभोरक्तवत्तर्मकः॥४७॥  
लावाद्याविष्किरास्त्वेतेवक्ष्यन्तेवर्तकादयः।  
वर्तकोवर्तिकाचैवबहीतितिरिकुकुटौ॥४८॥  
कङ्कशारपदेन्द्राभगोनर्दगिरिवर्तकाः।  
क्रकरोऽवकरश्चैववारङ्गचेति विष्किराः॥४९॥

lāvō vartīrakaścaiva vārtīkaḥ sakapiñjalah|  
 cakōraścōpacakraśca kukkubhō raktavartmakah||47||  
 lāvādyā viśkirāstvētē vakṣyantē vartakādayah|  
 vartakō vartikā caiva barhī tittirikukkuṭau||48||  
 kaṅkaśārapadēndrābhagōnardagirivartakāḥ|  
 krakarō'vakaraścaiva vāraḍaścēti [1] viśkirāḥ||49||  
 IAvo vartIrakaScaiva vArtIkaH sakapi~jjalaH|  
 cakoraScopacakraSca kukkuBo raktavartmakaH||47||  
 IAvAdyA viShkirAstvete vakShyante vartakAdayaH|  
 vartako vartikA caiva barhI tittirikukkuTau||48||  
 ka~gkaSArapadendrABagonardagirivartakAH|  
 krakaro&vakaraScaiva vAraDaSceti viShkirAH||49||

The following gallinaceous birds are fit for human consumption:

The common quail (*java*, *Turnix suscitates*), the rain quail (*vartiraka*, *Coturnix coromandelica*), the jungle bush quail (*gartika*, *Coturnix sylvatica*), the grey partridge (*kapinjala*, *Francolinus vulgaris*), Greek pheasant (*Chakora*, *Perdix rufa*), the sushi chukor- smaller Greek pheasant (*upachakra*, *Perdix rufa*), the crow pheasant (*kukubha*, *Coccyzus*), red jungle fowl (*raktavartamaka*, *Gallus ferruginous*): these beginning with the quail are the gallinaceous birds. We shall now enumerate the list of birds beginning with the male bustard or button quail (*vartaka*, *Turnix indica*), the female bustard or button quail (*gartika*, *Coturnix sylvatica*), the peacock (*barhi*, *Pavo cristatus*), the partridge (*tittiri*, *Arborophila torquata*), the red spur fowl (rooster) (*Kukkuta*, *Galloperdix spadicca*), heron (*kanka*, *Ardeidae*), the stork (*sarapada*, *Ciconia boycinia*), hedge sparrow (*Indrabha*, *Leucocerea aureola*), the hill partridge (*gonarda*, *Ardea sibirica*), the mountain quail (*girivartaka*, *Coturnix coturnix*), the snipe (*krakara*, *Ardea virago*) and the spoon bill (*varapada*, *Platela leucorodia*) [47-49]

शतपत्रोऽभृङ्गराजः कोयज्जिर्जीवजीवकः ।  
 कैरातः कोकिलोऽत्यूहो गोपापुत्रः प्रियात्मजः ॥५० ॥  
 लट्टालट्ट(ट्)षकोबभुर्वटहाडिणिमानकः ।  
 जटीदुन्दुभिपाककारलोहपृष्ठकुलिङ्गकाः ॥५१ ॥  
 कपोतशुकशारङ्गाश्चरटीकङ्कुयज्जिकाः ।  
 सारिकाकलविङ्कश्चचटकोऽङ्गारचूडकः ॥५२ ॥

पारावतःपाण्ड(न)विकट्युक्ता:प्रतुदाद् विजाः।  
 śatapatrō bhṛṅgarājah kōyaṣṭīrjīvajīvakah|  
 kairātah kōkilō'tyūhō gōpāputrah priyātmajah||50||  
 laṭṭā laṭṭā(tū)ṣakō babhrurvaṭahā ḥiṇḍimānakah|  
 jaṭī dundubhipākkāralōhaprṣṭhakuliṅgakāh [1] ||51||  
 kapōtaśukaśāraṅgāściraṭīkaṅkuyaṣṭikāh|  
 sārikā kalaviṅkaśca caṭakō'ṅgāracūḍakah||52||  
 pārāvataḥ pāṇḍa(na)vika ityuktāḥ pratudā dvijāḥ||53||  
 Satapatro BRu~ggarAjaH koyaShTirjlvalvakaH|  
 kairAtaH kokilo&tyUho gopAputraH priyAtmajaH||50||  
 laTTA laTTa(TU)Shako baBrurvaTahA DiNDimAnakaH|  
 jaTI dunduBipAkkAralohapRuShThakuli~ggakAH ||51||  
 kapotaSukaSAra<sub>ggASciraTIka</sub>gkuyaShTikAH|  
 sArikA kalavi~gkaSca caTako&~ggAracUDakaH||52||  
 pArAvataH pANDa(na)vika ityuktAH pratudA dvijAH|

The following birds from the Pecker family are suitable for human consumption:

The black woodpecker (*shatapatra*, *Picus martius*), the king bird of paradise–shrike (*Bhringaraja*, *Lanalidae*), the green-bill coucal (*kojashthi*, *Centropus chlororhynchos*), peacock pheasant (*jivajivaka*, *Chalcurus*), red-faced malkoha (*kairata*, *Pheanicophaeus pyrrhocephalus*), the koel (*kokila*, *Eudynamys honorata*), the red-vented bulbul (*Atyuha*, *Molpastes haemorrhous*), the cowbird (*gopaputra*, *Molothrus*), the Indian babbler (*priyatmaja*, *Argya caudata*), the pied flycatcher (*latva*, *Muscicapidae atricapilla*), paradise flycatcher (*lattashaka*, *Muscicapidae techitrea*), the Bengal tree pie (*Babhu-vataha*, *Dendrocitta rufa*), the toucan (*dindimantaka*, *Ramphastos toco*), the hoopoe (*jati*, *Upupa indica*), the grey hornbill (*dundubhi*, *Lophoceros birostris*), the green barbet (*pakkara*, *Thereiceryx zeylonicus*), the king fisher (*lauhaprishtha*, *Alcedo ispida*), the baya or weaver bird (*kulingaka*, *Ploceus benghalensis*), the dove (*kapota*, *Chalcophaps indica*), the green parakeet (*shuka*, *Psittacula spengeli*), the ringneck parakeet (*saranga*, *Palaeonis torquatus*), the babbler (*Chirati*, *Timaliidae*), the blossom headed parakeet (*kanku*, *Torquatus rosa*), the sun bird or honey-sucker (*yastika*, *Nectariniidae*), mynah (*sharika*, *Turdus salica*), the house sparrow (*kalavinka*, *Passer domesticus*), the tree sparrow (*chataka*, *Passer montanus*), the black bulbul (*angarachudaka*, *Hypsipetes leucocephalus*), the pigeon (*paravata*, *Columba treron*) and the wood pigeon (*pandanavika*, *Columba palumbus*).[50-52]

प्रसहयभक्षयन्तीतिप्रसहास्तेनसञ्जिताः ॥५३॥

भूशयाबिलवासित्वादानूपानूपसंश्रयात् ।

जलेनिवासाजजलजाजलेचर्याजजलेचराः ॥५४॥

स्थलजाजाङ्गलाः प्रोक्तामृगाजाङ्गलचारिणः ।

विकीर्यविष्किराश्चेतिप्रतुद्यप्रतुदाः स्मृताः ॥५५॥

योनिरष्टविधात्वेषामांसानांपरिकीर्तिता ।

prasahya bhakṣayantīti prasahāstēna sañjñitāḥ||53||

bhūśayā bilavāsitvādānūpānūpasarṁśrayāt [3] |

jalē nivāsājjalajā jalēcaryājjalēcarāḥ||54||

sthalaṁ jāngalāḥ prōktā mrgā jāngalacāriṇāḥ|

vikīrya viśkirāścēti pratudya pratudāḥ smṛtāḥ||55||

yōniraṣṭavidhā tvēśā māṁsānāṁ parikīrtitā||56||

prasahya BakShayantlti prasahAstena sajjitAH||53||

BUSayA bilavAsitvAdAnUpAnUpasaMSrayAt |

jale nivAsAjjalajA jalecaryAjjalecarAH||54||

sthalaṁ jA~ggaṁAH proktA mRugA jA~ggalacAriNaH|

vikIrya viShkirASceti pratudya pratudAH smRutAH||55||

yoniraShTavidhA tveShA mAMsAnAM parikIrtitA|

And now we define the various groups of animals listed above. The first are the “tearers”. The creatures that eat their food by rending or tearing – using their horns, claws, or talons - are known as tearers or of the tearer group of creatures. Those that dwell beneath the ground are called burrowing creatures. Those that dwell in wetlands or marshy lands are known as wetland creatures. Owing to their living in water, some creatures are known as aquatic creatures or water dwellers. Those that move about in water as well as land are known as water-roamers or amphibious creatures. Those (antelopes) that dwell and roam in the jungles are known as *jangala* creatures. Those that scatter food with their claws and pick them up are known as gallinaceous birds and those that peck at their food are called peckers. These are the eight varieties of sources of flesh. [53-55]

प्रसहाभूशयानूपवारिजावारिचारिणः ॥५६॥

गुरुष्णस्निग्धमधुराबलोपचयवर्धनाः ।

वृष्याः परं वातहराः कफपित्तविवर्धनाः ॥५७॥  
हिताव्यायामनित्येष्योनरादीप्ताग्नयश्चये।  
प्रसहानां विशेषणमां संमांसाशिनां भिषक् ॥५८॥  
जीर्णार्शोग्रहणीदोषशोषार्तानां प्रयोजयेत्।  
लावाद्योवैष्णिकरोवर्गः प्रतुदाजाइगलामृगाः ॥५९॥  
लघवः शीतमधुराः सकषायाहितानृणाम्।  
पितोत्तरेवातमध्येसन्निपातेकफानुगे ॥६०॥  
विष्णिकरावर्तकाद्यास्तु प्रसहाल्पान्तरागुणैः।  
prasahā bhūśayānūpavārijā vāricāriṇah||56||  
gurūṣṇasnidhamadhumāraḥ balōpacayavardhanāḥ|  
vṛṣyāḥ param vātaharāḥ kaphapittavardhanāḥ||57||  
hitā vyāyāmanityēbhyō narā dīptāgnayaśca yē|  
prasahānām viśeṣēṇā māṁsaṁ māṁsāśinām bhiṣak||58||  
jīrṇārśōgrahaṇīdōṣāśōśārtānām prayōjayēt|  
lāvādyō vaiśkirō vargaḥ pratudā jāṅgalā mrgāḥ||59||  
laghavaḥ śītamadhumāraḥ sakaśāyā hitā nṛnām|  
pittōttarē vātāmadhyē sannipātē kaphānugē||60||  
viśkirā vartakādyāstu prasahālpāntarā gunaiḥ||61||  
prasahA BU Say An Upav ArijA vA ric Ari Na H||56||  
gurU Sh Nas nigdhamadhu rA bal opacayavardhan AH|  
vRu Shy AH paraM vAtahar AH ka Pa Pittavardhan AH||57||  
hitA vyAyA manitye Byo narA dIptAgnaya Sca ye|  
prasahAnAM viSe SheNa mAMsaM mAMsASinAM BiShak||58||  
jIrnArSograhaNIdoShaSoShArtAnAM prayojayet|  
lAvAdyo vaiShkiro vargaH pratudA jA~ggalA mRugAH||59||  
laGavaH SItamadhu rA sakaShAyA hitA nRuNAm|  
pittottare vAtamadhye sannipAte kaPA nuge||60||  
viShkirA vartakAdyAstu prasahAlpAntarA guNaiH|

Next we talk of the general qualities of the flesh of these animals:

The tearer, the burrower, the wetland, the aquatic and the amphibious— these five groups are heavy, hot, unctuous, sweet and these enhance strength and obesity. They are also aphrodisiacs and are very effective against vata while greatly aggravating kapha and pitta. They are wholesome to individuals who exercise daily and whose digestive fire is strong. [56-60]

The physician should prescribe the flesh of the tearer group of carnivorous animals to patients suffering from chronic piles, assimilation disorders and consumption. [58]

Now the general qualities of the quail and bustard families of gallinaceous birds, the pecker class of birds, and the *jangala* antelopes. The flesh of the common quail family of gallinaceous birds, pecker family of birds and *jangala* animals is light, cold in potency, sweet, and slightly astringent in taste and is beneficial to those who suffer from vitiation of three dosha in which pitta is predominant, vata is moderate and kapha is relatively less aggravated. The flesh of the gallinaceous birds of the bustard family, however differs slightly in action from that of the flesh of the tearer group and therefore is called out separately. [59-60]

#### Qualities of meat of goat and sheep

नातिशीतगुरुस्निग्धं मांसमाजमदोषलम्॥६१॥

शरीरधातुसामान्यादनभिष्यन्तिबृहणम्।

मांसंमधुरशीतत्वादगुरुबृहणमाविकम्॥६२॥

योनावजाविके मिश्रगोचरत्वादनिश्चिते।

nātiśītagurusnigdham [1] māṁsamājamadōṣalam||61||

śarīradhātusāmānyādanabhiṣyandi bṛmhāṇam|

māṁsam madhuraśītatvādguru bṛmhāṇamāvikam||62||

yōnāvajāvikē [2] miśragōcaratvādaniścītē|63|

The flesh of the goat (*capra hircus*) is not very cold in potency, not heavy, and not unctuous. It helps keep the dosha in harmony with the human body-elements and acts as a nourishing without being deliquescent in effect. [61]

The flesh of the sheep (*ovis*) is heavy due to it being cold in potency, sweet in taste (and digestion) and nourishing. The sheep and the goat are found both in wet and *jangala* settings and hence cannot be grouped in any particular category defined above. [62]

सामान्येनोपदिष्टानांमांसानांस्वगुणैःपृथक्॥६३॥

केषाञ्चिदगुणवैशेष्यादविशेषउपदेक्ष्यते।

दर्शनशोत्रमेधाग्निवयोवर्णस्वरायुषाम्॥६४॥

बर्हीहितमोबल्योवातधनोमांसशक्रलः।  
गुरुष्णस्निग्धमधुराःस्वरवर्णबलप्रदाः॥६५॥

बृहणाःशुक्रलाश्चोकताहंसामारुतनाशनाः।  
स्निग्धाश्चोष्णाश्चवृष्याश्चबृहणाःस्वरबोधनाः॥६६॥

बल्याःपरंवातहराःस्वेदनाश्चरणायुधाः।  
गुरुष्णोमधुरोनातिधन्वानूपनिषेवणात्॥६७॥

तितिरिःसञ्जयेच्छीघ्रंत्रीन्दोषाननिलोल्बणान्।  
पितश्लेष्मविकारेषुसरक्तेषुकपिञ्जलाः॥६८॥

मन्दवातेषुशस्यन्तेशैत्यमाधुर्यलाघवात्।  
लावाःकषायमधुरालघवोऽग्निविवर्धनाः॥६९॥

सन्निपातप्रशमनाःकटुकाश्चविपाकतः।  
गोधाविपाकेमधुराकषायकटुकारसे॥७०॥

वातपितप्रशमनीबृहणीबलवर्धनी।  
शल्लकोमधुराम्लश्चविपाकेकटुकःस्मृतः॥७१॥

वातपितकफधनश्चकासश्वासहरस्तथा।  
कषायविशदाःशीतारक्तपितनिर्बहणाः॥७२॥

विपाकेमधुराश्चैवकपोतागृहवासिनः।  
तेभ्योलघुतराःकिञ्चित्कपोतावनवासिनः॥७३॥

शीताःसङ्ग्राहिणश्चैवस्वल्पमूत्रकराश्चते।  
शुकमांसंकषायाम्लंविपाकेरुक्षशीतलम्॥७४॥

शोषकासक्षयहितंसङ्ग्राहिलघुदीपनम्।  
चटकामधुराःस्निग्धाबलशुक्रविवर्धनाः॥७५॥

सन्निपातप्रशमनाःशमनामारुतस्यच।  
कषायोविशदोरुक्षःशीतःपाकेकटुर्लघुः॥७६॥

शशःस्वादुःप्रशस्तश्चसन्निपातेऽनिलावरे।  
मधुरामधुराःपाकेत्रिदोषशमनाःशिवाः॥७७॥

लघवोबद्धविष्मूत्राःशीताश्चैणाःप्रकीर्तिताः।  
स्नेहनंबृहणंवृष्यंश्रमधनमनिलापहम्॥७८॥

वराहपिशितंबल्यंरोचनंस्वेदनंगुरु।  
 गव्यंकेवलवातेषुपीनसेविषमज्वरे॥७९॥  
 शुष्ककासश्रमात्यग्निमांसक्षयहितंचतत्।  
 स्निग्धोष्णंमधुरंवृष्यंमाहिषंगुरुतर्पणम्॥८०॥  
 दाढ्यंबृहत्त्वमुत्साहंस्वप्नंचजनयत्यपि।  
 गुरुष्णामधुराबल्याबृहणाःपवनापहाः॥८१॥  
 मत्स्याःस्निग्धाश्चवृष्याश्चबहुदोषाःप्रकीर्तिताः।  
 शैवालशष्पभोजित्वात्स्वप्नस्यचविवर्जनात्॥८२॥  
 रोहितोदीपनीयश्चलघुपाकोमहाबलः।  
 वर्ण्योवातहरोवृष्यश्चक्षुष्योबलवर्धनः॥८३॥  
 मेधास्मृतिकरःपथ्यःशोषधनःकूर्मउच्यते।  
 खड्गमांसमभिष्यन्दिबलकृञ्मधुरंस्मृतम्॥८४॥  
 स्नेहनंबृहणंवर्ण्यश्रमधनमनिलापहम्।  
 धार्तराष्ट्रचकोराणांदक्षाणांशिखिनामपि॥८५॥  
 चटकानांचयानिस्युरण्डानिचहितानिच।  
 क्षीणरेतःसुकासेषुहृद्रोगेषुक्षतेषुच॥८६॥  
 मधुराण्यविदाहीनिसद्योबलकराणिच।  
 शरीरबृहणेनान्यत्खाद्यंमांसाद् विशिष्यते॥८७॥  
 इतिवर्गस्तृतीयोऽयमांसानांपरिकीर्तितः।  
 sāmānyenōpadīṣṭānāṁ māṁsānāṁ svaguṇaiḥ pṛthak||63||  
 kēśāñcidguṇavaiśēṣyādviśēṣa upadēkṣyatē|  
 darśanaśrōtramēdhāgnivayōvarṇasvarāyusām||64||  
 barhī hitatamō balyō vātaghnō māṁsaśukralahī|  
 gurūṣṇasnidhamadhurāhī svaravarṇabalapradāhī||65||  
 bṛhmaṇāhī śukralāścōktā haṁsā mārutanāśanāhī|  
 snigdhāścōṣṇāśca vṛṣyāśca bṛhmaṇāhī svarabōdhanāhī||66||  
 balyāhī param vātaharāhī svēdanāścaraṇāyudhāhī|  
 gurūṣṇō madhurō nātidhanvānūpaniṣēvanāt||67||

tittirih sañjayēcchīghram trīn dōśānanilōlbaṇān|  
pittaślēśmavikārēṣu saraktēṣu kapiñjalāḥ||68||  
mandavātēṣu śasyantē śaityamādhuryalāghavāṭ|  
lāvāḥ kaśāyamadhurā laghavō'gnivivardhanāḥ||69||  
sannipātpraśamanāḥ kaṭukāśca vipākataḥ|  
gōdhā vipākē madhurā kaśāyakaṭukā rasē||70||  
vātapittapraśamanī bṛṁhaṇī balavardhanī|  
śallakō madhurāmlaśca vipākē kaṭukaḥ smṛtaḥ||71||  
vātapittakaphaghnaśca kāsaśvāsaharastathā|  
kaśāyaviśadāḥ [3] śītā raktaपitanibarhaṇāḥ||72||  
vipākē madhurāścaiva kapōtā gṛhavāsinah|  
tēbhyo laghutarāḥ kiñcit kapōtā vanavāsinah [4] ||73||  
śītāḥ saṅgrāhiṇaścaiva svalpamūtrakarāśca tē|  
śukamāṁsam kaśāyāmlam vipākē rūkṣaśītalām||74||  
śōśakāśakṣayahitam saṅgrāhi laghu dīpanam|  
caṭakā madhurāḥ snigdhā balaśukravivardhanāḥ||75||  
sannipātpraśamanāḥ śamanā mārutasya ca|  
kaśāyō viśadō rūkṣah śītah pākē kaṭurlaghuḥ||76||  
śaśah svāduḥ praśastaśca sannipātē'nilāvarē|  
madhurā madhurāḥ pākē tridōṣaśamanāḥ śivāḥ||77||  
laghavō baddhavīṇmūtrāḥ śītāścaināḥ prakīrtitāḥ|  
snēhanam bṛṁhaṇam vṛṣyam śramaghnamanilāpaham||78||  
varāhapiśitam balyam rōcanam svēdanam guru|  
gavyam kēvalavātēṣu pīnasē viśamajvarē||79||  
śuṣkakāśaśramātyagnimāṁsakṣayahitam ca tat|  
snigdhōṣṇam madhuram vṛṣyam māhiṣam guru tarpanam||80||  
dārdhyam bṛhāttvamutsāham svapnam ca janayatyapi|  
gurūṣṇā madhurā balyā bṛṁhaṇāḥ pavanāpahāḥ||81||

matsyāḥ snigdhāśca vṛṣyāśca bahudōśāḥ prakīrtitāḥ|  
śaivālaśaśpabhōjtvātśvapnasya ca vivarjanāt||82||

rōhitō dīpanīyaśca laghupākō mahābalah|  
varṇyō vātaharō vṛṣyaścakṣuṣyō balavardhanaḥ||83||

mēdhāsmṛtikarah pathyah śōśaghnaḥ kūrma ucyatē|  
khaṅgamāṁsamabhiṣyandi balakṛṇmadhuram smṛtam||84||

snēhanam bṛmhāṇam varṇyam śramaghnamanilāpaham|  
dhārtarāṣṭracakōrāṇam dakṣāṇam śikhināmapi||85||

caṭakānām ca yāni syurāṇḍāni ca hitāni ca|  
kṣīṇarētaḥsu kāsēsu hṛdrōgēsu kṣatēsu ca||86||

madhurāṇyavidāhīni sadyōbalakarāṇi ca|  
śarīrabṛmhāṇē nānyat khādyam māṁsādvīśyatē||87||

iti vargastrītyō'yam māṁsānām parikīrtitahiti māṁsavargastrīyah  
sAmAnyenopadiShTAnAM mAMsAnAM svaguNaiH pRuthak||63||

keShA~jcidguNavaiSeShyAdviSeSha upadekShyate|  
darSanaSrotamedhAgnivayovarNasvarAyuShAmI||64||

barhI hitatamo balyo vAtaGno mAMsaSukralaH|  
gurUShNasnigdhamadhurAH svaravarNabalapradAH||65||

bRuMhaNAH SukralAScoktA haMsA mArutanASanAH|  
snigdhAScoShNASca vRuShyASca bRuMhaNAH svarabodhanAH||66||

balyAH paraM vAtaharAH svedanAScaraNayudhAH|  
gurUShNo madhuro nAtidhanvAnUpaniShevaNAt||67||

tittiriH sa~jjayecCIGraM trIn doShAnanilolbaNAn|  
pittaSleShmavikAreShu sarakteShu kapi~jjalAH||68||

mandavAteShu Sasyante SaityamAdhuryalAGavAt|  
IAvAH kaShAyamadhurA laGavo&gnivivardhanAH||69||

sannipAtapraSamanAH kaTukASca vipAkataH|  
godhA vipAke madhurA kaShAyakaTukA rase||70||

vAtapittapraSamanI bRuMhaNI balavardhanI|  
Sallako madhurAmlaSca vipAke kaTukaH smRutaH||71||  
vAtapittakaPaGnaSca kAsaSvAsaharastathA|  
kaShAyaviSadAH SItA raktapittanibarhaNAH||72||  
vipAke madhurAScaiva kapotA gRuhavAsinaH|  
teByo laGutarAH ki~jcit kapotA vanavAsinaH ||73||  
SItAH sa~ggrAhiNaScaiva svalpamUtrakarASca te|  
SukamAMsaM kaShAyAmlaM vipAke rUkShaSItalam||74||  
SoShakAsakShayahitaM sa~ggrAhi laGu dlpanam|  
caTakA madhurAH snigdhA balaSukravivardhanAH||75||  
sannipAtapraSamanAH SamanA mArutasya ca|  
kaShAyo viSado rUkShaH SItaH pAke kaTurlaGuH||76||  
SaSaH svAduH praSastaSca sannipAte&nilAvare|  
madhurA madhurAH pAke tridoShaSamanAH SivAH||77||  
laGavo baddhaviNmUtrAH SItAScainAH prakIrtitAH|  
snehanaM bRuMhaNaM vRuShyaM SramaGnamaniApaham||78||  
varAhapiSitaM balyaM rocanaM svedanaM guru|  
gavyaM kevalavAteShu plnase viShamajvare||79||  
SuShkakAsaSramAtyagnimAMsakShayahitaM ca tat|  
snigdhoShNaM madhuraM vRuShyaM mAhiShaM guru tarpaNam||80||  
dArDhyaM bRuhattvamutsAham svapnaM ca janayatyapi|  
gurUShNA madhurA balyA bRuMhaNAH pavanApahAH||81||  
matsyAH snigdhASca vRuShyASca bahudoShAH prakIrtitAH|  
SaivAlaSaShpaBojtvAtsvapnasya ca vivarjanAt||82||  
rohito dlpanlyaSca laGupAko mahAbalaH|  
varNyo vAtaharo vRuShyaScakShuShyo balavardhanaH||83||  
medhAsmRutikaraH pathyaH SoShaGnaH kUrma ucyate|  
Ka~ggamAMsamaBiShyandi balakRunmadhuraM smRutam||84||

snehanaM bRuMhaNaM varNyaM SramaGnamanilApaham|  
dhArtarAShTracakorANAM dakShANAM SiKinAmaPi||85||  
caTakAnAM ca yAni syuraNDAni ca hitAni ca|  
kShINaretaHsu kAseShu hRudrogeShu kShateShu ca||86||  
madhurANYavidAhlni sadyobalakarANi ca|  
SarlrabRuMhaNe nAnyat KAdyaM mAMsAdviSiShyate||87||  
iti vargastRutlyo&yaM mAMsAnAM parikIrtitaH|

Now that the general properties of flesh have been stated, we shall describe the specific qualities of the flesh of some of these creatures:

The flesh of the peacock is most conducive to enhancing sight, hearing, intelligence, body-heat, youth, complexion, voice and life. It is strengthening, is effective in treating vata and promotes the growth of flesh tissues and semen. [63-64]

The flesh of the swan is heavy, hot, unctuous, sweet, enhances voice, complexion, strength, production of semen, is nourishing, and is effective in treating vata.

The flesh of the rooster/fowl is unctuous, hot, aphrodisiac, and nourishing. It also helps strengthen the voice, is effective in treating vata and is sudorific (produces sweating) [66]

The flesh of the partridge is heavy, hot, and sweet. The bird's habitat is neither limited to marshy nor to *jangala* country. Partridge meat rapidly controls the three dosha, especially vata. [67]

The flesh of the grey partridge is cold in potency, sweet and light and is recommended in pitta, kapha, blood and mild vata disorders. [68]

The flesh of the common-quail is astringent, sweet in taste, light, very effective in enhancing digestive fire, alleviates tridosha, and is pungent on digestion. [69]

The flesh of the iguana is sweet on digestion, astringent and pungent in taste, alleviates vata and pitta and is nourishing and strengthening. [70]

The flesh of the pangolin is sweet and sour in taste and is said to be pungent on digestion. It alleviates the tridosha and is effective in treating cough and dyspepsia. [71]

The flesh of the domestic pigeon is astringent in taste, tender, cold in potency, is effective in treating *raktapitta* and is sweet (in digestion). [72]

The flesh of the wild pigeon is slightly lighter than that of the birds mentioned above, is cold in potency, astringent, and reduces the secretion of urine. [73]

The flesh of the green parakeet is astringent in taste and sour on digestion, dry in property and cold in potency. It is beneficial in curing the diseases such as consumption, cough and wasting. The flesh is astringent in action, light to digest and stimulates agni. [74]

The flesh of the sparrow is sweet and unctuous, very effective in promoting strength and semen and alleviating tridosha especially vata. [75]

Rabbit meat is astringent in taste, limpid, dry, cold in potency, pungent on digestion, light and sweet. It is recommended in alleviating *tridosha* where vata is relatively mild. [76]

The flesh of the blackbuck is said to be sweet (in taste as well as on digestion), alleviates tridosha, generally is wholesome, light, aggravates constipation and restricts urination, and is cold in potency. [77]

The flesh of the hog promotes unctuousness, is nourishing, (is an) aphrodisiac, removes fatigue, alleviates vata, strengthens, and is appetizing, sudorific and heavy. [78]

The flesh of the cow is beneficial in curing disorders due to vata, rhinitis, *vishama jwara* (fever with irregular pattern), dry cough, fatigue, excessive agni, and atrophy of the flesh. [79]

The flesh of the buffalo is unctuous, hot in potency, sweet, aphrodisiac, heavy to digest and nourishing. It also promotes firmness and corpulence, and sleep. [80]

The flesh of the fish in general is heavy to digest, hot in potency, sweet in taste, strengthening, nourishing, is effective in treating vata, unctuous, and an aphrodisiac. It however has many hazardous properties as well. [81]

As *rohita* fish eats moss and doesn't sleep at all, its flesh is appetizing, light to digest and greatly promotes strength. [82]

The flesh of the tortoise is said to promote healthy complexion, strength, intelligence and memory, and is effective in treating consumption and vata. It is an aphrodisiac, is beneficial to sight, and is wholesome. [83]

The flesh of the rhinoceros is said to be deliquescent, promotes strength and completion, and is effective in treating vata. It is sweet, unctuous, nourishing, and restorative. [84]

The eggs of the swan, the *chakor*, the rooster, the peacock, and the sparrow are beneficial in oligo-spermia, cough, cardiac disorder and pulmonary lesions. They are sweet, non-irritant and immediately strengthening. [85-86]

No other food except flesh is nourishing. Thus, the third group of meats is described.

इतिमांसवर्गस्तुतीयः ॥३॥

ti vargastrītyō'yaṁ māṁsānāṁ parikīrtitahiti māṁsavargastrītyah

iti mAMsavargastRutlyaH||3||

This concludes the third category of edible meat.

*Class of vegetables*

अथशाकवर्गः-

पाठाशुषाशटीशाकंवास्तुकंसुनिषण्णाकम्॥८८॥

विद्याद्ग्राहित्रिदोषधनंभिन्नवर्चस्तुवास्तुकम्।

त्रिदोषशमनीवृष्याकाकमाचीरसायनी॥८९॥

नात्युष्णशीतवीर्याचभेदिनीकृष्ठनाशिनी।

राजक्षवकशाकंतुत्रिदोषशमनंलघु॥९०॥

ग्रहिशस्तंविशेषणग्रहणयर्शोविकारिणाम्।

कालशाकंतुकटुकंदीपनंगरशोफजित्॥९१॥

लघूष्णंवातलंरक्षंकालायं शाकमुच्यते।

दीपनीचोष्णवीर्याचग्राहिणीकफमारुते॥९२॥

प्रशस्यतेऽम्लचाङ्गरीग्रहणयर्शोहिताचसा।

मधुरामधुरापाकेभेदिनीश्लेष्मवर्धनी॥९३॥

वृष्यास्निग्धाचशीताचमदधनीचाप्युपोदिका।

रुक्षोमदविष्ठनश्चप्रशस्तोरकतपित्तिनाम्॥९४॥

मधुरोमधुरःपाकेशीतलस्तण्डुलीयकः।

मण्डूकपर्णीवेत्राग्रंकुचेलावनतिक्तकम्॥९५॥

कर्कोटकावल्गुजकौपटोलंशकुलादनी

वृषपुष्पाणिशार्द्दिगेष्टाकेम्बूकंसकठिल्लकम्॥९६॥

नाडीकलायंगोजिह्वावार्ताकंतिलपर्णिका।

कौलकंकार्कशंनैम्बंशाकंपार्पटकंचयत्॥९७॥

कफपित्तहरंतिक्तंशीतंकटुविपच्यते।

atha śākavargaḥ-

pāṭhāśuśāśatīśākam vāstukam suniṣaṇṇākam||88||

vidyādgrāhi tridōṣaghnam bhinnavarcastu vāstukam|

tridōṣaśamanī vṛṣyā kākamācī rasāyanī||89||

nātyusnaśītavīryā ca bhēdinī kuṣthanāśinī|  
rājakṣavakaśākam tu tridōṣaśamanam laghu||90||  
grāhi śastam viśeṣēṇa grahaṇyarśōvikāriṇām|  
kālaśākam tu kaṭukam dīpanam garaśōphajit||91||  
laghūṣṇam vātalam rūkṣam kālāyam [1] śākamucyatē|  
dīpanī cōṣṇavīryā ca grāhiṇī kaphamārutē||92||  
praśasyatē'mlacāṅgērī grahaṇyarśōhitā ca sā|  
madhurā madhurā pākē bhēdinī ślēśmavardhanī||93||  
vṛṣyā snigdhā ca śītā ca madaghṇī cāpyupōdikā|  
rūkṣō madaviṣaghnaśca praśastō raktapittinām||94||  
madhurō madhuraḥ pākē śītalastaṇḍulīyakah|  
maṇḍūkaparnī vētrāgram kucēlā vanatiktakam||95||  
karkōṭakāvalgujakau paṭōlam śakulādanī|  
vṛṣapuṣpāṇi śārngeṣṭā kēmbūkam sakāṭhillakam||96||  
nādī kalāyam gōjihvā vārtākam tilaparṇikā|  
kaulakam kārkaśam naimbam śākam pārpaṭakam ca yat||97||  
kaphapittaharam tiktam śītam kaṭu vipacyatē||98||  
atha SAkavargaH-  
pAThASuShASaTISAkAM vAstukaM suniShaNNAkam||88||  
vidyAdgrAhi tridoShaGnaM Binnavarcastu vAstukam|  
tridoShaSamanI vRuShyA kAkamAcl rasAyanI||89||  
nAtyuShNaSItavlryA ca BedinI kuShThanASinI|  
rAjakShavakaSAkAM tu tridoShaSamanaM laGu||90||  
grAhi SastaM viSeSheNa grahaNyarsovikAriNAm|  
kAlaSAkAM tu kaTukaM dlpanaM garaSoPajit||91||  
laGUShNaM vAtalaM rUkShaM kAlAyaM SAkamucyatē|  
dlpanI coShNavIryA ca grAhiNI kaPamArute||92||  
praSasyate&mlacA~ggerI grahaNyarsohitA ca sAI

madhurA madhurA pAke BedinI SleShmavardhanI||93||  
vRuShyA snigdhA ca SItA ca madaGnI cApyupodikA|  
rUkSho madaviShaGnaSca praSasto raktaPittinAm||94||  
madhuro madhuraH pAke SItalastaNDullyakaH|  
maNDUkaparNI vetrAgraM kucelA vanatiktakam||95||  
karkoTakAvalgujakau paTolaM SakulAdanI  
vRuShapuShpANi SA~ggeShTA kembUkaM sakaThillakam||96||  
nADI kalAyaM gojihvA vArtAkaM tilaparNikA|  
kaulakaM kArkaSaM naimbaM SAkaM pArpaTakaM ca yat||97||  
kaPapittaharaM tiktaM SItaM kaTu vipacyate|

Now begins the class of vegetables. *Patha* (*Cissampelos pareira* Linn.), negro coffee (*Cassia occidentalis* Linn.), *shatishaka*, and *marsilea* (or *sunishannaka*) are considered as astringents and effective agents for alleviating three dosha. *Vastuka* is also laxative. [88]

The black night shade (*Solanum nigrum* Linn.) alleviates the three dosha, is an aphrodisiac, rejuvenates, is neither very hot nor cold in potency, is a laxative, and is effective in treating skin lesions. [89]

The *rajakshavaka* (asthma weed, or *Euphorbia thymifolia* Linn.) is effective in alleviating tridosha, is light to digest, is an astringent and is specially recommended for patients suffering from assimilation disorders and piles. [90]

The *kalashaka* (jute plant, (*Corchorus capsularis* Linn.)) is said to be pungent and appetizing, and is effective in treating the effect of poison and edema. The *kalaya* (chickling vetch) is said to be light, hot, dry, and promotes vata. [91]

*Changeri* (the yellow Wood-sorrel or Indian sorrel, or (*Oxalis corniculata* Linn.)) is hot in potency, is an appetizer and is an astringent. It is recommended in kapha and vata disorders and is beneficial in assimilation disorders and piles. [92]

*Upodika* (the Indian spinach, (*Basella rubra* Linn.)) is sweet (in taste and on digestion), unctuous, cold in potency, is a laxative, aggravates kapha, and is effective in treating intoxication. [93]

*Tanduliyaka* (The prickly *amaranth*, or (*Amaranthus spinosus* Linn.)) is dry, nullifies the effects of intoxication and poison and is beneficial in *raktaPitta*. It is sweet (in taste and on digestion) and is cold in potency. [94]

Indian pennywort (*Centella asiatica* Linn.), country willow (*Calamus tenuis* Roxb.), *raj-patha /kuchela*, *vanatiktaka* (*Mollugo spergula* Linn.), sponge gourd (*karkotaka*,

Momordica dioca Roxb), avalgujaka-bakuchi seeds (*Psoralea corylifolia* Linn.), patolam-pointed gourd (*Trichosanthes dioica* Roxb.) and *shakuladani*- kurroa (*Picrorhiza kurroa* Royle ex Benth), the flowers of *vasaka* (*Adhatoda vasika* Nees), *sharngeshtha* (*Dregia volubilis* (Linn.f) Benth), *kebuka* (*Ipomoea aquatica* Forsk), hog's weed (*kathillaka*, *Boerhavia diffusa* Linn.), wild tossa jute (*nadi shaka*, *Corchorus olitarius* Linn.), chickling vetch (*kalaya*, *Lathyrus sativus* Linn.), elephant's foot (*gojihva*, *Launaea asplenifolia* Hook.f.), brinjal (*vartaka*, *Solanum melongena* Linn.) and dog mustard (*tilaparnika*, *Cleome icosaandra* Linn.), carilla (*kaulakam*, *Momordica charantia* Linn.), *karkasa* (*Momordica* sp.), neem leaves (*nimbashakam*, *Azadirachta indica* A.Juss) and trailing rungia (*parpatakam*, *Fumaria vaillantii* Loisel): these are regulators of kapha and pitta, bitter in taste, cold in potency and pungent on digestion. [95-97]

सर्वाणिसूप्यशाकानिफञ्जीचिल्लीकुतुम्बकः ॥९८॥  
 आलुकानिचसर्वाणिसपत्राणिकुटिञ्जरम् ।  
 शणशाल्मलिपुष्पाणिकर्बुदारः सुवर्चला ॥९९॥  
 निष्पावः कोविदारश्चपत्तुरश्चुच्छुपर्णिका ।  
 कुमारजीवोलोट्टाकः पालङ्ग्यामारिषस्तथा ॥१००॥  
 कलम्बनालिकासूर्यः कुसुमभवृकधूमकौ ।  
 लक्ष्मणाचप्रपुन्नाडोनलिनीकाकुठेरकः ॥१०१॥  
 लोणिकायवशाकंचकूष्माण्डकमवलग्नुजम् ।  
 यातुकः शालकल्याणीत्रिपर्णीपीलुपर्णिका ॥१०२॥  
 शाकंगुरुचरुक्षंचप्रायोविष्टश्यजीर्यति ।  
 मधुरंशीतवीर्यचपुरीषस्यचभेदनम् ॥१०३॥  
 स्विन्नंनिष्पीडितरसंस्नेहाद्यंतत्प्रशस्यते ।  
 शणस्यकोविदारस्यकर्बुदारस्यशाल्मलेः ॥१०४॥  
 पुष्पंग्राहिप्रशस्तंचरक्तपितेविशेषतः ।  
 न्यग्रोधोदुम्बराश्वत्थप्लक्षपद्मादिपल्लवाः ॥१०५॥  
 कषायाः स्तम्भनाः शीताहिताः पितातिसारिणाम् ।  
 वायुंवत्सादनीहन्यात्कफंगण्डीरचित्रकौ ॥१०६॥  
 श्रेयसीबिल्वपर्णीचबिल्वपत्रंतुवातनुत् ।  
 भण्डीशतावरीशाकंबलाजीवन्तिकंचयत् ॥१०७॥  
 पर्वण्याः पर्वपुष्प्याश्चवातपितहरंस्मृतम् ।

लघुभिन्नशकृतिकतंलाङ्गलक्युरुबूकयोः॥१०८॥  
तिलवेतसशाकंचशाकंपञ्चाङ्गुलस्यच।  
वातलंकटुतिकताम्लमधोमार्गप्रवर्तनम्॥१०९॥  
रुक्षाम्लमुष्णंकौसुम्भंकफद्नंपित्तवर्धनम्।  
त्रपुसैर्वारुकंस्वादुगुरुविष्टम्भशीतलम्॥११०॥  
मुखप्रियंचरुक्षंचमूत्रलंत्रपुसंत्वति।  
एर्वारुकंचसम्पक्वदाहतृष्णाक्लमार्तिनुत्॥१११॥  
वर्चोभेदीन्यलाबूनि रुक्षशीतगुरुणिच।  
चिर्भैर्वारुकेतद् वर्चोभेदहितेतुते॥११२॥  
सक्षारं पक्वकूष्माण्डंमधुराम्लंतथालघु।  
सृष्टमूत्रपुरीषंचसर्वदोषनिर्बहृणम्॥११३॥

sarvāṇī sūpyaśākāni phañjī cillī kutumbakah||98||  
ālukāni ca sarvāṇī sapatrāṇī kuṭiñjaram [3] |  
śaṇaśālmalipuṣpāṇī karbudārah suvarcalā||99||  
niṣpāvah kōvidāraśca patturaścuccuparṇikā|  
kumārajīvō lōṭṭakah pālañkyā māriṣastathā||100||  
kalambanālikāsūryah kusumbhavṛkadhūmakau|  
lakṣmaṇā ca prapunnāḍō nalinīkā kuṭhērakah||101||  
lōṇikā yavaśākam ca kūṣmāṇḍakamavalgujam|  
yātukah śālakalyāṇī triparṇī pīluparṇikā||102||  
śākam guru ca rūkṣam ca prāyō viṣṭabhyā jīryati|  
madhuram śītavīryam ca purīṣasya ca bhēdanam||103||  
svinnam niṣpiḍitarasam snēhāḍhyam tat praśasyatē|  
śaṇasya kōvidārasya karbudārasya śālmalēḥ||104||  
puṣparām grāhi praśastam ca rakta pittē viśēṣataḥ|  
nyagrōdhōdumbarāśvatthaplakṣapadma dipallavāḥ||105||  
kaṣāyāḥ stambhanāḥ śītā hitāḥ pittatisāriṇām|  
vāyurā vatsādanī hanyāt kapham gaṇḍīracitrakau||106||

śrēyasī bilvaparnī ca bilvapatram tu vātanut|  
bhaṇḍī śatāvarīśākam balā jīvantikam ca yat||107||  
parvanyāḥ parvapuspyāśca vātapittaharam smṛtam|  
laghu bhinnaśakṛttiktam lāṅgalakyurubukayōḥ||108||  
tilavētasaśākam ca śākam pañcāṅgulasya ca|  
vātalām kaṭutiktāmlamadhōmārgapravartanam||109||  
rūkṣāmlamuṣṇam kausumbham kaphaghnam pittavardhanam|  
trapusairvārukam svādu guru viṣṭambhi śītalam||110||  
mukhapriyam ca rūkṣam ca mūtralām trapusam tvati|  
ērvārukam ca sampakvarām dāhatrṣṇāklamārtinut||111||  
varcōbhēdīnyalābūni [4] rūkṣaśītagurūṇi ca|  
cirbhaṭairvārukē tadadvarcōbhēdahitē tu tē||112||  
sakṣāram [5] pakvakūṣmāṇḍam madhurāmlām tathā laghu|  
śṛṣṭamūtrapurīṣam ca sarvadōṣanibarhaṇam||113||  
sarvANi sUpyaSAkAni Pa~jjI cillI kutumbakaH||98||  
AlukAni ca sarvANi sapatrANi kuTi~jjaram |  
SaNaSAImalipuShpANi karbudAraH suvarcalA||99||  
niShpAvaH kovidAraSca patturaScuccuparNikA|  
kumArajIvo loTTAkA H pAla~gkyA mArishastathA||100||  
kalambanAlikAsUryaH kusumBavRukadhUmakau|  
lakShmaNA ca prapunnADo nalinIkA kuTherakaH||101||  
loNikA yavaSAkam ca kUShmANDakamavalgujam|  
yAtukaH SA lakalyANI triparNI pluparNikA||102||  
SAkam guru ca rUkShaM ca prAyo viShTaBya jlryati|  
madhuraM SItavlryaM ca purIshasya ca Bedanam||103||  
svinnaM niShpIDitarasaM snehADhyam tat praSasyate|  
SaNasya kovidArasya karbudArasya SAImaleH||104||  
puShpaM grAhi praSastaM ca raktapitte viSeShataH|

nyagrodhodumbarASvatthaplakShapadmAdipallavAH||105||  
kaShAyAH stamBanAH SItA hitAH pittAtisAriNAm|  
vAyuM vatsAdanI hanyAt kaPaM gaNDIracitrakau||106||  
Sreyasl bilvaparNI ca bilvapatraM tu vAtanut|  
BaNDI SatAvarISAkAM baIA jIvantikaM ca yat||107||  
parvaNyAH parvapuShpyASca vAtapittaharaM smRutam|  
laGu BinnaSakRuttiktaM IA~ggalakyurubUkayoH||108||  
tilavetasSAkAM ca SAkAM pa<sub>jcA</sub>ggulasya ca|  
vAtalaM kaTutiktAmlamadhomArgapravartanam||109||  
rUkShAmlamuShNaM kausumBaM kaPaGnaM pittavardhanam|  
trapusairvArukaM svAdu guru viShTamBi SItalam||110||  
muKapriyaM ca rUkShaM ca mUtralaM trapusaM tvati|  
ervArukaM ca sampakvaM dAhatRuShNAklamArtinut||111||  
varcoBedInyalAbUni rUkShaSItagurUNi ca|  
cirBaTairvAruke tadvadvarcoBedahite tu te||112||  
sakShAraM pakvakUShmANDaM madhurAmlaM tathA laGu|  
sRuShTamUtrapuriShaM ca sarvadoShanibarhaNam||113||

All pot-herbs: bind weed (*phanji*, Rivea ornata (Roxb.) chois), chilli/white goose foot (Chenopodium album Linn.), white dead nettle shrub (*kutumbaka*, Lamium album L.), all tubers of *aluka* (Dioscorea species) variety with their leaves, *kutinjara patra* (Digeria muricate (Linn.) Mart), Bengal hemp plant (*shana*, Chotalaria verrucosa Linn.), flowers of silk cotton (*shalmalipushpa*, Salmalia malabarica Schott), white mountain ebony (*karbudara*, Bauhinia variegata Linn.), heliotrope (*suvarchala*, Malva rotundifolia Linn.), lablab (*nishpava*, Dolichos lablab Linn.), variegated mountain ebony (*kovidara*, Bauhinia purpurea Linn), coxcomb (*pattura*, Alternanthera sessilis (Linn.) R.Br.ex DC), multa jute (*chunchuparnika*, Corchorus Sp.), *kumarajiva* (Amaranthus paniculatus Linn.), *lottaka* (Amaranthus tricolor Linn.), spinach (*palankya*, Spinacia oleracea Linn.), *marishaamaranth* (Amaranthus blitus Linn. var. oleracea Duthie), *kalambanalika* (Ipomoea aquatica Forsk), mustard (*asuryah*, Brassica juncea (Linn.) Czern & Coss), safflower (*kusumbha*, Carthamus tinctorius Linn.), vrikdhumak- young shirish, lakshmana, prapunnada- fetid cassia (Cassia tora Linn.), nalini- lotus stalk (tuber of Nelumbo nucifera Gaertn.), *kutherakah-* shrubby basil (Ocimum sp.), *lonika-* common Indian purslane (Portulaca quadrifida Linn.), *yavashakam-* (Chenopodium purpurascens), *kushmanda-* white gourd (Benincasa hispida (Thunb) Cogn.), *avalgujam-* babchi leaves

(*Psoralea corylifolia* Linn.), *yatuka* (*Desmodium* sp.), *shalkalyani* (*Alternanthera* sp.), *triparni*- maidenhair (*Adiantum lunulatum* Burm.), *peeluparnika*- trilobed virgin's bower (*Maerua arenaria* Hook.F & Th.)- are heavy, dry, delayed in digestion, sweet, cold in potency and loosen the feces. After being boiled and drained of the juice, and mixed with plenty of unctuous substance, they are good for eating. [98-103]

The flowers of Bengal hemp- *shana pushpa* (*Crotalaria juncea* Linn), *kovidara pushpa* (*Bauhinia purpurea* Linn), *karbudara pushpa*- white mountain ebony (*Bauhinia variegata* Linn.) and *shalmali pushpa*- silk cotton (*Salmalia malabarica* (DC) Schott & Endl) are astringent and specially recommended in *raktapitta*. [104]

The tender leaves of the *nyagrodha*- banyan (*Ficus benghalensis* Linn), *udumbara*- gular fig (*Ficus racemosa* Linn.), *ashvattha*- holy fig (*Ficus religiosa* Linn.), *plaksha*- yellow barked fig (*Ficus lacor* Buch-Ham) and *padma*- lotus (*Nelumbo nucifera* Gaertn) etc. are astringent in taste, styptic, cold in potency and especially useful in diarrhea of the pitta type. [105]

*Vatsadani*, or *guduchi* (*Tinospora cordifolia* Willd Miers) pacify vata while *gandira* and *chitraka*- white flowered leadwort (*Plumbago zeylanica* Linn.) pacify kapha. *Sheyasi*- elephant pepper (*Pluchea lanceolata* C.B. Clarke), *bilvaparni* (*Limonia crenulata* Roxb.) and *bilvapatram*- *bael* (*Aegle marmelos* (L.) Correa ex Roxb.) leaves pacify vata. [106]

*Bhandi*- (*Albizia lebbeck* (Linn.) Willd), *shatavari shaka*- climbing asparagus (*Asparagus racemosus* Willd), *bala*- heart-leaved sida (*Sida cordifolia* Linn.), *jivanti shaka*-cork swallow wort (*Leptadenia reticulata* W.& A.) and *parvanyah*- the leaves of scutch grass (*Polygonum* sp.), and *parvapushpi* (*Polygonum* sp.) are said to be effective in curing vata and pitta [107-108]

*Tiktam Langali*- The glory lily (*Gloriosa superba* Linn.) and *urubukayoh patrashakam*- red flowered castor oil plant (*Ricinus communis* Linn.) are light, laxative and bitter. *Tila shaka*- (*Sesamum indicum* Linn.), *vetasa*-goat willow (*Salix caprea* Linn.), and *panchangulasyashakam*- castor oil plant (*Ricinus* sp.) are vata promoters, pungent, bitter, sour in taste, and stimulate the downward movement of bowels. *Kusumba*- the safflower (*Carthamus tinctorius* Linn.) vegetable is dry, acid, hot, is effective in treating kapha and promotes pitta. [109]

*Trapusha*- Common cucumber (*Cucumis sativus* Linn.) and *ervaruka*- phut cucumber (*Cucumis utilissimus* Roxb.) are sweet, heavy, slow to digest, and cold in potency. The common cucumber is palatable, dry and a powerful diuretic. The phut cucumber, if fully ripe, allays burning, thirst, exhaustion and pain. [110]

*Alabu*- the bottle-gourd (*Lagenaria siceraria* (Molina) Standl.) is a laxative, dry, cold in potency and heavy. [111]

*Chirbhata*- Sweet melon (*Cucumis momordica* Duth and Full) and phut cucumber are similar to *alabu*- the bottle gourd (*Lagenaria siceraria* (Molina) Standl.) except that they are wholesome in loose motions. The ripe white gourd- *kushmanda* (*Benincasa hispida*

(Thunb) Cogn.) is slightly alkaline, sour-sweet, light, reduces urination and defecation, and alleviates tri-dosha. [112-113]

केलूटं चकदम्बं चनदी माषकमैन्दुकम्।  
विशदं गुरुशीतं च समभिष्यन्दिचोच्यते ॥ ११४ ॥

उत्पलानिकषायाणिरक्तपितहराणिच।  
तथातालप्रलम्बं स्यादुरः क्षतरुजापहम् ॥ ११५ ॥

खर्जरं तालशस्यं चरक्तपितक्षयापहम्।  
तरुटबिसशालूकक्रौञ्चादनकशेरुकम् ॥ ११६ ॥

शृङ्गाटकाइकलोड्यं च गुरुविष्टम्भिशीतलम्।  
कुमुदो त्पलनालास्तु सपुष्पाः सफलाः स्मृताः ॥ ११७ ॥

शीताः स्वादुकषायास्तुकफमारुतकोपनाः।  
कषायमीषद्विष्टम्भिरक्तपितहरं स्मृतम् ॥ ११८ ॥

पौष्करं तु भवेद्बीजं मधुरं रसपाकयोः।  
बल्यः शीतोगुरुः स्निग्धस्तर्पणो बृंहणात्मकः ॥ ११९ ॥

वातपितहरः स्वादुर्वृष्यो मुञ्जातकः परम्।  
जीवनो बृंहणो वृष्यः कण्ठ्यः शस्तोरसायने ॥ १२० ॥

विदारिकन्दो बल्यश्च मूत्रलः स्वादुशीतलः।  
अम्लिकायाः स्मृतः कन्दो ग्रहणर्शो हितोलघुः ॥ १२१ ॥

नात्युष्णः कफवातध्नो ग्राही शस्तो मदात्यये।  
त्रिदोषं बद्धविणमूत्रं सार्षपं शाकमुच्यते ॥ १२२ ॥

(तद्वत् स्याद्रक्तनालस्यरुक्षमम्लं विशेषतः।)

तद्वत्पिण्डालुकं विद्यात्कन्दत्वाच्च मुखप्रियम्।  
सर्पच्छत्रकवर्ज्या स्तु बहव्योऽन्याश्छत्रजातयः ॥ १२३ ॥

शीताः पीनसकर्त्यश्च मधुरागुर्व्यएव च।  
चतुर्थः शाकवर्गोऽयं पत्रकन्दफलाश्रयः ॥ १२४ ॥

इति शाकवर्गश्चतुर्थः ॥ ४ ॥

kēlūṭam ca kadambam ca nadīmāśakam aindukam|  
viśadam guru śītarām ca samabhiṣyandi cōcyatē||114||

utpalāni kaśāyāni raktapittaharāṇi ca|  
tathā tālapralambam syāduraḥkṣatarujāpaham||115||

kharjūram tālaśasyaṁ ca raktapittakṣayāpaham|  
tarūṭabisaśālūkakrauñcādanakaśērukam||116||

śṛṅgāṭakāñkalōdyam ca guru viṣṭambhi śītalām|  
kumudōtpalanālāstu sapuṣpāḥ saphalāḥ smṛtāḥ||117||

śītāḥ svādukaśāyāstu kaphamārutakōpanāḥ|  
kaśāyamīśadviṣṭambhi raktapittaharam smṛtam||118||

pauṣkaram tu bhavēdbijam madhuram rasapākayoh|  
balyah śītō guruḥ snigdhastarpaṇō bṛmhāṇātmakah||119||

vātapittaharaḥ svādurvṛṣyō muñjātakaḥ param|  
jīvanō bṛmhāṇō vṛṣyah kanṭhyah śastō rasāyanē||120||

vidārikandō balyaśca mūtralaḥ svāduśītalah|  
amlīkāyah smṛtāḥ kandō grahaṇyarśōhitō laghuḥ||121||

nātyuṣṇah kaphavātaghnō grāhī śastō madātyayē|  
tridōṣam baddhaviṇmūtram sārṣapam śākamucyatē||122||

(tadvat [1] syādraktanālasya rūkṣamamlam viśēṣataḥ|)

tadvat piṇḍālukam vidyāt kandatvācca mukhapriyam|  
sarpacchattrakavarjyāstu bahvyō’nyāśchatrajātayah||123||

śītāḥ pīnasakartryaśca madhurā gurvyā ēva ca|  
caturthaḥ śākavargō’yaṁ patrakandaphalāśrayah||124||

iti śākavargaścaturthaḥ

keIUTaM ca kadambaM ca nadImAShakamaindukam|  
viSadaM guru SItaM ca samaBiShyandi cocyate||114||

utpalAni kaShAyANi raktapittaharANi ca|  
tathA tAlapralambaM syAduraHkShatarujApaham||115||

KarjUraM tAlaSasyaM ca raktapittakShayApaham|  
tarUTabisaSAIUkakrau~jcAdanakaSerukam||116||

SRu<sub>gg</sub>TakA gkaloDyaM ca guru viShTamBi SIalam|  
 kumudotpalanAI Astu sapuShpAH saPalAH smRutAH||117||  
 SItAH svAdukaShAyAstu kaPamArutakopanAH|  
 kaShAyamI ShadviShTamBi raktapittaharaM smRutam||118||  
 pauShkaraM tu BavedbljaM madhuraM rasapAkayoH|  
 balyaH SIto guruH snigdhaстarpaNo bRuMhaNAtmakaH||119||  
 vAtapittaharaH svAdurvRuShyo mu~jjAtakaH param|  
 jlvanо bRuMhaNo vRuShyaH kaNThyaH Sasto rasAyane||120||  
 vidArikando balyaSca mUtralaH svAduSItalaH|  
 amlikAyAH smRutaH kando grahaNyarSohito laGuH||121||  
 nAtyuShNaH kaPavAtaGno grAhI Sasto madAtyaye|  
 tridoShaM baddhaviNmUtraM sArShapaM SAkamucyate||122||  
 (tadvat syAdraktanAlasya rUkShamamlam viSeShataH|)  
 tadvat piNDAlukaM vidyAt kandatvAcca muKapriyam|  
 sarpacCatrakavarjyAstu bahvyo&nyASCatrajAtayaH||123||  
 SItAH plnasakartryaSca madhurA gurvyA eva ca|  
 caturthaH SAkavargo&yaM patrakandaPaIA SrayaH||124||  
 iti SAkavargaScaturthaH||4||

The qualities of the keluta etc.:

The *keluta*, *kadamba* (*Anthocephalus cadamba* Miq), *nadi-mashaka* and *ainduka*-common mountain ebony are non-slim, heavy, cold in potency and are said to increase discharges in body. [114]

The blue water lily/ *utpalani* (*Nymphaea caerulea* auct. W. Afr.) is an astringent and is effective in treating *raktapitta*. Similarly, the sprouts of palmyra palm/ *talapralamba* (*Borassus flabellifer* Linn.) are effective in curing *urakshata* (pulmonary lesion). [115]

Dates (kharjura, *Phoenix sylvestris* Roxb.) and *talashasya* (kernel of palmyra palm) are effective in curing *raktapitta* and wasting. *Taruta* (*Dioscorea belophylla* Voight), lotus filaments, lotus (*Nelumbo nucifera* Gaertn.) bulbs and fruits, *kaunchadana* / blue star water-lily (*Nymphaea stellata* Willd.), *kasheruka*/ club-rush (*Scirpus grossus* Linn.f.), *shringataka*/ Indian water chest-nut (*Trapa natans* Linn.Var. *bispinosa* Roxb.Makino),

and *ankolodya*/ Fox nut (*Euryale ferox* Salisb) are heavy, slow to digest, and cold in potency. [116]

The rhizomes of *kumudal* night-flower lotus (*Nymphaea stellata* Willd.) and *utpalā*- blue water lily together with the flowers and fruits are said to be cold in potency, sweet, astringent. These tend to provoke kapha and vata. [117]

The seeds of sacred lotus (*paushakarabija*, or the seeds of *Nelumbo nucifera* Gaertn.) are said to be slightly astringent, slow to digest in the intestines, effective agents for curing *raktapitta*, and sweet (in taste and post digestion). [118]

*Munjatakah* (salep, *Orchis latifolia* Linn.) is said to be strengthening, cold in potency, heavy, unctuous, nourishing, is effective in treating vata and pitta, sweet and highly aphrodisiac. [119]

The bulb of *vidarikanda* (Indian kudju, *pueraria tuberosa* (wild)) is vitalizing, nourishing, aphrodisiac, voice-tonic, it is recommended in rejuvenation; strengthening, diuretic, sweet and cold in potency. [120]

*Amlikakanda* (*vitis pentaphylla* Thunb.) is regarded as beneficial in assimilation disorder and piles, and is light, not very hot, is effective in treating cough and vata, is an astringent and is recommended in chronic alcoholism. [121]

The curry of mustard leaves/ *sarshapashaka* (*Brassica campestris* Linn. Var. Sarson Prain) vitiates all of the three dosha and suppresses urine and defecation. Similar are the properties of rosella which, in addition to these, is dry and acidic. Similar too are the properties of *pindalukal* common yam (*Dioscorea* species). But, it is more palatable as it is a *kanda* (bulb). [122]

Ingesting the *sarpa* mushroom is forbidden. The other varieties of edible mushrooms are cold in potency, cause rhinitis, and are sweet and heavy. Thus, ends the fourth section on vegetables including leaves, bulbs and fruits [123-124]

#### *Class of fruits*

अथफलवर्गः-

तृष्णादाहजवरश्वासरक्तपितक्षतक्षयान्।  
वातपितमुदावर्तस्वरभेदंमदात्ययम्॥१२५॥  
तिक्तास्यतामास्यशोषंकासंचाशुव्यपोहति।  
मृदवीकाबृंहणीवृज्यामधुरास्निग्धशीतला॥१२६॥  
मधुरंबृंहणंवृष्यंखर्जूरंगुरुशीतलम्।  
क्षयेऽभिघातेदाहेचवातपितेचतद् धितम्॥१२७॥  
तर्पणंबृंहणंफलगुगुरुविष्टम्भशीतलम्।

परूषकंमधूकंचवातपितेचशस्यते॥१२८॥  
मधुरंबृहणंबल्यमाम्रातंतर्पणंगुरु।  
सस्नेहंश्लेष्मकंशीतंवृष्ण्यंविष्टभ्यजीर्यति॥१२९॥  
तालशस्यानिसिद्धानिनारिकेलफलानिच।  
बृहणस्निग्धशीतानिबल्यानिमधुराणिच॥१३०॥  
मधुराम्लकषायंचविष्टम्भिरुशीतलम्।  
पितश्लेष्मकरंभव्यंग्राहिवक्रविशोधनम्॥१३१॥  
अम्लंपरूषकंद्राक्षाबदराणयारुकाणिच।  
पितश्लेष्मप्रकोपीणिकर्कन्धुनिकुचान्यपि॥१३२॥  
नात्युष्णंगुरुसम्पकवंस्वादुप्रायंमुखप्रियम्।  
बृहणंजीर्यतिक्षिप्रनातिदोषलमारुकम्॥१३३॥  
दविविधंशीतमुष्णंचमधुरंचाम्लमेवच।  
गुरुपारावतंज्ञेयमरुच्यत्यग्निनाशनम्॥१३४॥  
भव्यादल्पान्तररगुणंकाशमर्यफलमुच्यते।  
तथैवाल्पान्तररगुणंतूदमम्लंपरूषकात्॥१३५॥  
कषायमधुरंटडंकंवातलंगुरुशीतलम्।  
कपित्थमामंकण्ठघनंविषघ्नंग्राहिवातलम्॥१३६॥  
मधुराम्लकषायत्वात्सौगन्ध्याच्चरुचिप्रदम्।  
परिपक्वं चदोषघ्नंविषघ्नंग्राहिगुर्वपि॥१३७॥  
बिल्वंतुदुर्जरंपक्वंदोषलंपूतिमारुतम्।  
स्निग्धोष्णतीक्ष्णंतटबालंटीपनंकफवातजित्॥१३८॥  
रक्तपितकरंबालमापूर्णपितवर्धनम्।  
पक्वमामंजयेदवायुमांसशुक्रबलप्रदम्॥१३९॥  
कषायमधुरप्रायंगुरुविष्टम्भिरुशीतलम्।  
जाम्बवंकफपितघ्नंग्राहिवातकरंपरम्॥१४०॥  
बदरंमधुरस्निग्धंभेदनंवातपितजित्।  
तच्छुष्कंकफवातघ्नंपितेनचविरुद्धयते॥१४१॥  
कषायमधुरंशीतंग्राहिसिम्बि(ञ्च)तिकाफलम्।

गाङ्गेरुकीकरीरंचबिम्बीतोदनधन्वनम्॥१४२॥  
मधुरंसकषायंचशीतंपितकफापहम्।  
सम्पक्वंपनसंमोचंराजादनफलानिच॥१४३॥  
स्वादूनिसकषायाणिस्निग्धशीतगुरुणिच।  
कषायविशदत्वाच्चसौगन्ध्याच्चरुचिप्रदम्॥१४४॥  
अवदंशक्षमंहृदयंवातलंवलीफलम्।  
नीपंशताहवकं पीलुतृणशून्यंविकङ्कतम्॥१४५॥  
प्राचीनामलकंचैवदोषधनंगरहारिच।  
ऐङ्गुदंतिकतमधुरंस्निग्धोष्णंकफवातजित्॥१४६॥  
तिन्दुकंकफपितधनंकषायंमधुरंलघु।  
विद्यादामलकेसर्वान्नसांल्लवणवर्जितान्॥१४७॥  
रुक्षंस्वादुकषायाम्लंकफपितहरंपरम्।  
रसासृङ्मांसमेदोजान्दोषान्हन्तिबिभीतकम्॥१४८॥  
स्वरभेदकफोत्क्लेदपितरोगविनाशनम्।  
अम्लंकषायमधुरंवातधनंग्राहिदीपनम्॥१४९॥  
स्निग्धोष्णंदाडिमंहृदयंकफपिताविरोधिच।  
रुक्षाम्लंदाडिमंयतुतिपितानिलकोपनम्॥१५०॥  
मधुरंपितनुतेषांपूर्वदाडिममुत्तमम्।  
वृक्षाम्लंग्राहिरुक्षोष्णंवातश्लेष्मणिशस्यते॥१५१॥  
अम्लिकायाःफलंपक्वंतस्मादल्पान्तरंगुणैः।  
गुणैस्तैरेवसंयुक्तंभेदनंत्वम्लवेतसम्॥१५२॥  
शूलेऽरुचौविबन्धेचमन्देऽग्नौमद्यविष्टवे।  
हिक्काश्वासेचकासेचवम्यांवर्चोगदेषुच॥१५३॥  
वातश्लेष्मसमुत्थेषुसर्वेष्वेवोपदिश्यते।  
केसरंमातुलुङ्गस्यलघुशेषमतोऽन्यथा॥१५४॥  
रोचनोदीपनोहृदयःसुगन्धिस्त्वग्निवर्जितः।  
कर्घूरःकफवातधनःश्वासहिक्कार्शसांहितः॥१५५॥  
मधुरंकिञ्चिदम्लंचहृदयंभक्तप्ररोचनम्।

दुर्जंरवातशमनंनागरङ्गफलंगुरु ॥१५६॥  
 वातामाभिषुकाक्षोटमुकूलकनिकोचका:।  
 गुरुष्णस्निग्धमधुराःसोरुमाणाबलप्रदाः ॥१५७॥  
 वातध्नाबृहणावृष्याःकफपित्ताभिवर्धनाः।  
 प्रियालमेषांसदशंविद्यादौष्ण्यंविनागुणैः ॥१५८॥  
 श्लेष्मलंमधुरंशीतंश्लेष्मातकफलंगुरु।  
 श्लेष्मलंगुरुविष्टम्भिचाङ्कोटफलमग्निजित् ॥१५९॥  
 गुरुष्णंमधुरंरुक्षंकेशध्नंचशमीफलम्।  
 विष्टम्भयतिकारञ्जंवातश्लेष्माविरोधिच ॥१६०॥  
 आम्रातकंदन्तशठमम्लंसकरमर्दकम्।  
 रक्तपित्तकरंविद्यादैरावतकमेवच ॥१६१॥  
 वातध्नंदीपनंचैववार्ताकंकटुतिक्तकम्।  
 वातलंकफपित्तध्नंविद्यात्पर्पटकीफलम् ॥१६२॥  
 पित्तश्लेष्मध्नमम्लंचवातलंचाक्षिकीफलम्।  
 मधुराण्यम्लपाकीनिपित्तश्लेष्महराणिच ॥१६३॥  
 अश्वत्थोदुम्बरप्लक्षन्यग्रोधानांफलानिच।  
 कषायमधुराम्लानिवातलानिगुरुणिच ॥१६४॥  
 भल्लातकास्थ्यग्निसमंतन्मांसंस्वादुशीतलम्।  
 पञ्चमःफलवर्गोऽयमुक्तःप्रायोपयोगिकः ॥१६५॥  
 इतिफलवर्गः ॥५॥  
 atha phalavargah-  
 त्रृष्णादाहजवार्षासराक्तपित्तक्षातक्षयान्।  
 वातपित्तमुदावर्तम् स्वरभेदम् मदात्ययम् ॥१२५॥  
 तिक्तास्यादाहजवार्षम् कासाम् चासु व्यापोहति।  
 मृद्विकां ब्रह्महान् वृश्यां मधुरां स्निग्धाशीतलां ॥१२६॥  
 मधुराम् ब्रह्महान् वृश्याम् खर्जुराम् गुरुं सीतलाम्।  
 क्षये भृग्निहाते दाहे च वातपित्ते च तद्धितम् ॥१२७॥  
 तरपानाम् ब्रह्महानाम् फल्गु गुरुं विष्टाम्भीं सीतलाम्।

parūṣakarṇ madhūkarṇ ca vātapiṭṭē ca śasyatē||128||  
madhuraṁ bṝmhaṇaṁ balyamāmrātarṇ tarpaṇaṁ guru|  
sasnēhaṁ ślēśmalam Śītaṁ vr̄syam viṣṭabhyā jīryati||129||  
tālaśasyāni siddhāni nārikēlaphalāni ca|  
bṝmhaṇasnidhaŚītaṇi balyāni madhurāṇi ca||130||  
madhurāmlakaśāyām ca viṣṭambhi guru Śītalām|  
pittaślēśmakaram bhavyām grāhi vakraviśōdhanam||131||  
amlām parūṣakarṇ drākṣā badarānyārukāṇi ca|  
pittaślēśmaprakōṇi karkandhunikucānyapi||132||  
nātyuṣṇām guru sampakvarṇ svāduprāyām mukhapriyam|  
bṝmhaṇaṁ jīryati kṣipram nātidōṣalamārukam||133||  
dvividhaṁ Śītamuṣṇām ca madhuraṁ cāmlamēva ca|  
guru pārāvataṁ jñēyamarucyatyagnināśanam||134||  
bhavyādalpāntaraguṇām kāśmaryaphalamucyatē|  
tathaivālpāntaraguṇām tūdamamlām parūṣakāt||135||  
kaśāyamadhuraṁ ṭāṅkām vātalaṁ guru Śītalām|  
kapitthamāmaṁ kanṭhaghnaṁ viṣaghnaṁ grāhi vātalam [1] ||136||  
madhurāmlakaśāyatvāt saugandhyācca rucipradam|  
paripakvarṇ [2] ca dōṣaghnaṁ viṣaghnaṁ grāhi gurvapi||137||  
bilvarṇ tu durjaraṁ pakvarṇ dōṣalaṁ pūtimārutam|  
snigdhōṣṇatīkṣṇām tadbālaṁ dīpanaṁ kaphavātajit||138||  
raktapittakaram bālamāpūrṇām pittavardhanam|  
pakvamāmram jayēdvāyūm māṁsaśukrabalapradam||139||  
kaśāyamadhuraprāyām guru viṣṭambhi Śītalām|  
jāmbavaṁ kaphapittaghnaṁ grāhi vātakaram param||140||  
badaraṁ madhuraṁ snigdhaṁ bhēdanaṁ vātapiṭṭajit|  
tacchuṣkarṇ kaphavātaghnaṁ pittē na ca virudhyatē||141||  
kaśāyamadhuraṁ Śītaṁ grāhi simbi(ñci)tikāphalam|

gāṅgērukī karīram ca bimbī tōdanadhanvanam||142||  
madhuram sakaśayam ca śītam pittakaphāpaham|  
sampakvarṁ panasam mōcam rājādanaphalāni ca||143||  
svādūni sakaśayāṇi snigdhaśītagurūṇi ca|  
kaśayaviśadatvācca saugandhyācca rucipradam||144||  
avadarṁśakṣamarṁ hṛdyam vātalam lavalīphalam|  
nīparṁ śatāhvakam [3] pīlu ṭṛṇaśūnyam vikaṇkatam||145||  
prācīnāmalakam caiva dōṣaghnam garahāri ca|  
aiṅgudam tiktamadhuram snigdhōṣṇam kaphavātajit||146||  
tindukam kaphapittaghnam kaśayam madhuram laghu|  
vidyādāmalakē sarvān rasāmllavaṇavarjitān||147||  
rūkṣam svādu kaśayāmlam kaphapittaharam param|  
rasāśṛṇmāṁsamēdōjāndōśān hanti bibhītakam||148||  
svarabhēdakaphōtklēdapittarōgavināśanam|  
amlam kaśayamadhuram vātaghnam grāhi dīpanam||149||  
snigdhōṣṇam dādimam hṛdyam kaphapittāvirōdhi ca|  
rūkṣāmlam dādimam yattu tat pittānilakōpanam||150||  
madhuram pittanuttēśāṁ pūrvam dādimamuttamam|  
vṛkṣāmlam grāhi rūkṣōṣṇam vātaślēṣmaṇi śasyatē||151||  
amlikāyāḥ phalaṁ pakvaṁ tasmādalpāntaram guṇaiḥ|  
guṇaistairēva samyuktam bhēdanam tvamlavētasam||152||  
śūlē’rucau vibandhē ca mandē’gnau madyaviplavē [4] |  
hikkāsvāsē ca kāsē ca vamyāṁ varcōgadēṣu ca||153||  
vātaślēṣmasamutthēṣu sarvēśvēvōpadiśyatē|  
kēsaram mātuluṅgasya laghu śēśamatō’nyathā||154||  
rōcanō dīpanō hṛdyāḥ sugandhistvagvivarjitāḥ|  
karcūraḥ kaphavātaghnah śvāsaḥikkārśasāṁ hitah||155||  
madhuram kiñcidamlam ca hṛdyam bhaktaprarōcanam|

durjaram vātaśamanam nāgaraṅgaphalam guru [5] ||156||  
vātāmābhishukākṣotamukūlakanikōcakāḥ|  
gurūṣṇasnidhamadhurāḥ sōrumāṇā balapradāḥ||157||  
vātaghnā bṛhmaṇā vṛṣyāḥ kaphapittābhivardhanāḥ|  
priyālamēśāṁ sadrśāṁ vidyādauṣṇyāṁ vinā guṇaiḥ||158||  
ślēśmalāṁ madhurāṁ śītarāṁ ślēśmātakaphalāṁ guru|  
ślēśmalāṁ guru viṣṭambhi cāṅkōṭaphalamagnijit||159||  
gurūṣṇāṁ madhurāṁ rūkṣāṁ kēśaghnāṁ ca śamīphalam|  
viṣṭambhayati kārañjam vātaślēśmāvirōdhi ca||160||  
āmrātakāṁ dantaśāṭhamamlāṁ sakaramardakam|  
raktapittakāṁ vidyādairāvatakamēva ca||161||  
vātaghnāṁ dīpanāṁ caiva vārtākāṁ kaṭu tiktakam|  
vātalāṁ kaphapittaghnāṁ vidyāt parpaṭakīphalam||162||  
pittaślēśmaghnāmamlāṁ ca vātalāṁ cākṣikīphalam|  
madhurāṇyāmlapākīni pittaślēśmaharāṇi ca||163||  
aśvatthōdumbaraplakṣanyagrōdhānāṁ phalāni ca|  
kaṣāyamadhurāmlāni vātalāni gurūṇi ca||164||  
bhallātakāsthyaagnisamaṁ tanmāṁsaṁ svādu śītalam|  
pañcamah phalavargō'yamuktah prāyōpayōgikah||165||  
iti phalavargaḥ  
atha PalavargaH-  
tRuShNAdAhajvaraSvAsaraktapittakShatakShayAn|  
vAtapittamudAvartaM svaraBedaM madAtyayam||125||  
tiktAsyatAmAsyaSoShaM kAsaM cASu vyapohati|  
mRudvIkA bRuMhaNI vRuShyA madhurA snigdhaŚItalA||126||  
madhuraM bRuMhaNaM vRuShyaM KarjUraM guru ŚItalam|  
kShaye&BiGAtē dAhe ca vAtapitte ca taddhitam||127||  
tarpaNaM bRuMhaNaM Palgu guru viShTamBi ŚItalam|

parUShakaM madhUkaM ca vAtapitte ca Sasyate||128||  
madhuraM bRuMhaNaM balyamAmrAtaM tarpaNaM guru|  
sasnehaM SleShmalaM SItaM vRuShyaM viShTaBya jIryati||129||  
tAlaSasyAni siddhAni nArikelaPalAni ca|  
bRuMhaNasnigdhaSItAni balyAni madhurANI ca||130||  
madhurAmlakaShAyaM ca viShTamBi guru SItalam|  
pittaSleShmakaraM BavyaM grAhi vakraviSodhanam||131||  
amlaM parUShakaM drAkShA badarANyArukANI ca|  
pittaSleShmaprakopINi karkandhunikucAnyapi||132||  
nAtyuShNaM guru sampakvaM svAduprAyaM muKapriyam|  
bRuMhaNaM jIryati kShipraM nAtidoShalamArukam||133||  
dvividhaM SIamuShNaM ca madhuraM cAmlameva ca|  
guru pArAvataM j~jeyamarucyatyagninASanam||134||  
BavyAdalpAntaraguNaM kASmaryaPalamucyate|  
tathaivAlpAntaraguNaM tUdamamlaM parUShakAt||135||  
kaShAyamadhuraM Ta~gkaM vAtalaM guru SItalam|  
kapithamAmaM kaNThaGnaM viShaGnaM grAhi vAtalam ||136||  
madhurAmlakaShAyatvAt saugandhyAcca rucipradam|  
paripakvaM ca doShaGnaM viShaGnaM grAhi gurvapi||137||  
bilvaM tu durjaraM pakvaM doShalaM pUtimArutam|  
snigdhoShNatlkShNaM tadbAlaM dlpanaM kaPavAtajit||138||  
raktapittakaraM bAlamApUrNaM pittavardhanam|  
pakvamAmraM jayedvAyuM mAMsaSukrabalaPradam||139||  
kaShAyamadhuraprAyaM guru viShTamBi SItalam|  
jAmbavaM kaPapittaGnaM grAhi vAtakaraM param||140||  
badaraM madhuraM snigdhaM BedanaM vAtapittajit|  
tacCuShkaM kaPavAtaGnaM pitte na ca virudhyate||141||  
kaShAyamadhuraM SItaM grAhi simbi(~jci)tikAPalam|

gA~ggerukl karIraM ca bimbl todanadhanvanam||142||  
madhuraM sakaShAyaM ca SItaM pittakaPApaham|  
sampakvaM panasaM mocaM rAjAdanaPalAni ca||143||  
svAdUni sakaShAyAni snigdhaSItagurUNi ca|  
kaShAyaviSadatvAcca saugandhyAcca rucipradam||144||  
avadaMSakShamaM hRudyaM vAtalaM lavallPalam|  
nlpam SatAhvakam plu tRuNaSUnaM vika~gkatam||145||  
prAcInAmalakaM caiva doShaGnaM garahAri ca|  
ai~ggudaM tiktamadhuraM snigdhoShNaM kaPavAtajit||146||  
tindukaM kaPapittaGnaM kaShAyaM madhuraM laGu|  
vidyAdAmalake sarvAn rasAMlavaNavarjitAn||147||  
rUkShaM svAdu kaShAyAmlaM kaPapittaharaM param|  
rasAsRu~gmAMsamedojAndoShAn hanti biBI takam||148||  
svaRaBedakaPotkledapittarogavinASanam|  
amlaM kaShAyamadhuraM vAtaGnaM grAhi dlpanam||149||  
snigdhoShNaM dADimaM hRudyaM kaPapittAvirodh ca|  
rUkShAmlaM dADimaM yattu tat pittAnilakopanam||150||  
madhuraM pittanutteShAM pUrvaM dADimamuttamam|  
vRukShAmlaM grAhi rUkShoShNaM vAtaSleShmaNi Sasyate||151||  
amlikAyAH PalaM pakvaM tasmAdalpAntaraM guNaiH|  
guNaistaireva saMyuktaM BedanaM tvamlavetasam||152||  
SUle&rucau vibandhe ca mande&gnau madyaviplave |  
hikkASvAse ca kAse ca vamyAM varcogadeShu ca||153||  
vAtaSleShmasamuttheShu sarveShvevopadiSyate|  
kesaraM mA tulu~ggasya laGu SeShamato&nyathA||154||  
rocano dlpano hRudyaH sugandhistvagvivarjitaH|  
karcUraH kaPavAtaGnaH SvAsahikkArSasAM hitaH||155||  
madhuraM ki~jcidaMlaM ca hRudyaM Baktaprarocanam|

durjaraM vAtaSamanaM nAgara~ggaPalaM guru ||156||  
vAtAmABiShukAkShoTamukUlakanikocakAH|  
gurUShNasnigdhamadhurAH sorumANA balapradAH||157||  
vAtaGnA bRuMhaNA vRuShyAH kaPapittABivardhanAH|  
priyAlameShAM sadRuSaM vidyAdauShNyaM vinA guNaiH||158||  
SleShmalaM madhuraM SItaM SleShmAtakaPalaM guru| SleShmalaM guru viShTamBi  
cA~gkoTaPalamagnijit||159||  
gurUShNaM madhuraM rUkShaM keSaGnaM ca SamIPalam| viShTamBayati kAra~jjaM  
vAtaSleShmAvirodhi ca||160||  
AmrAtakaM dantaSaThamamlAM sakaramardakam| raktapittakaraM  
vidyAdairAvatakameva ca||161||  
vAtaGnaM dlpanaM caiva vArtAkAM kaTu tiktakam| vAtalaM kaPapittaGnaM vidyAt  
parpaTakIPalam||162||  
pittaSleShmaGnamamlaM ca vAtalaM cAkShikIPalam| madhurANyamlapAkIni  
pittaSleShmaharANI ca||163||  
aSvatthodumbaraplakShanyagrodhAnAM PalAni ca| kaShAyamadhurAmIAni vAtaAni  
gurUNi ca||164||  
BallAtakAsthyagnisamaM tanmAMsaM svAdu SItalam| pa~jcamaH  
Palavargo&yamuktaH prAyopayogikaH||165||  
iti PalavargaH||5||

Now begins the section on fruits. The grape / *mridvika* (*Vitis vinifera* Linn.) quickly is effective in treating thirst, burning fever, dyspnea, *raktapitta*, pectoral lesions, wasting disorders of vata and pitta, mis-peristalsis, hoarseness of voice, chronic alcoholism, bitter taste in the mouth, and cough. It is nourishing, and aphrodisiac, sweet, unctuous and cold in potency. [125-126]

The date/*khajura* (*phoenix sylvestris* Roxb.) is sweet, nourishing, aphrodisiac, heavy and cold in potency. It is beneficial in wasting, trauma, burning fever, and disorders of vata and pitta. [127]

Common fig (*Ficus carica* Linn.) is nourishing, heavy, delays digestion, and is cold in potency. Sweet *falsah/ parushaka* (*Grewia asiatica* Linn.), and *mohwah/madhuka* (*Madhuca indica* J.F. Gmel.) are recommended in disorders of vata and pitta. [128]

Indian hog plum (*Spondias pinnata* Linn.P) is sweet, nourishing, strengthening, nourishing, heavy, slight unctuous, increases kapha, is cold in potency, aphrodisiac and delayed in digestion. [129]

The ripe fruits of palmyra/*talashasyani* (*Borassus flabellifera* Linn.) and coconut/*narikelaphala* (*Cocos nucifera* Linn.) are nourishing, unctuous, cold in potency, strengthening and sweet. [130]

The showy dillenia fruit/*bhavyam* (*Dillenia indica* Linn.) is sweet, acid, astringent in taste, delayed in digestion, heavy and cold in potency. It increases pitta and kapha and is astringent and a mouth-cleanser. [131]

The sour *falsah*, grape, small jujube, the peach, wild jujube and small jack provoke or aggravate pitta and kapha. [132]

Fully ripe peach/*aruka* (*Prunus persica* Batsch.) is not very hot. It is heavy, sweetish, palatable, nourishing, quickly digested and not very unwholesome. [133]

Of the two varieties of *paravata* fruits (*Garcinia cowa* Roxb.), one is sweet and cold in potency, and the other is sour and hot. It is known to be heavy and is effective in treating anorexia while stimulating agni. [134]

The fruit of white teak (*Gmelina arborea* Roxb.) / *kashmaryaphalam* (*Gmelina arborea* Roxb.) is said to be slightly different in quality from showy dillenia. Similarly, sour mulberry/ *amlatuda* (*Morus alba* Linn.) differs in quality slightly from *falsah*. [135]

The pear fruit/*tankam* (*Pyrus communis* Linn.) is astringent and sweet in taste increases vata is heavy and cold in potency. The raw wood- apple/ *kapittham* (*Feronia limonia* (Linn.) Swingle adversely affects the voice, but neutralizes poison, is an astringent and increases vata. [136]

The ripe fruit of wood- apple being sweet, sour, astringent and fragrant, is relishing, is effective in treating discordance, acts as an antidote to poison, is an astringent and is heavy. [137]

The ripe bael fruit/*bilvam* (*Aegle marmelos* (L.) Correa ex Roxb.) is difficult of digestion, aggravator of all dosha and foul flatulence. The immature bael, fruit is unctuous, hot, acute, digestive stimulant and is effective in treating kapha and vata. [138]

While the young fruits of *amra*/ mango (*Mangifera indica* Linn.) causes *raktapitta* and unripe mango increases pitta, the fully ripe mango subdues vata and increases flesh, semen and strength. [139]

The *jambul* (*Syzygium cumini* Linn.Skeel) fruit is generally astringent and sweet in taste, heavy, delayed in digestion and cold in potency. It is effective in treating kapha and pitta, is an astringent and greatly increases vata [140]

The small jujube (*Ziziphus maritiana* Lam.) is a sweet, unctuous, laxative and is effective in treating vata and pitta. The dried small jujube (*Ziziphus* Sp.) is effective in treating kapha and vata and is not contraindicated in pitta. [141]

The *sinchitika* (a type of *Badara*) fruit is astringent, sweet in taste, cold in potency and astringent in action. The ginkgo fruit (*Grewia hirsuta* Vahl.), caper berry (*Capparis*

decidua Edgew.), scarlet-fruited gourd/ *bimbi phala* (*Coccinia indica* W & A), *todan* (Grewia species) and fruits of *dhaman /dhanvana* (Grewia tiliaefolia Vahl.) are sweet, slightly astringent in taste, cold in potency and are effective in curing pitta and kapha. The fully ripe Indian jackfruit/*panasa* (*Artocarpus integrifolia* Linn.f.), banana/*Mocha* (*Musa paradisiaca* Linn.) and fruits of Indian ape flower tree/*rajadana phala* (*Mimusops hexandra* Roxb.) are sweet, slightly astringent, unctuous, cold in potency and heavy [141-143]

The *lavanga-lata / lavali phala* (*Luvunga scandens* (Roxb.)) fruit, being astringent, limpid and fragrant, is an appetizer, savoury, cordial and increases vata. [144]

*Kadamba/Nipam* (*Mitragyna parviflora* (Roxb.) Korth), Indian dill/*Shatahvakam* (*Anethum sowa* Roxb. ex Flem), tooth brush tree/*Peelu* (*Salvadora persica* Linn.), screw pine/ *trinashunyam* (*Pandanus odoratissimus* Linn.f.), governor's plum/*vikankatam* (*Flacourtie ramonthchi* L. Herit) and puneala plum/*pracinamalaka* (*Flacourtie jangomas* (Lour.) Raeusch) are indeed dispellers of discordance and is effective in treating the effects of poison. [145]

The fruit of zachum oil plant/*alingudam* (*Balanites aegyptiaca* (Linn.) Delile), is bitter-sweet in taste, unctuous, hot and is effective in treating kapha and vata. The riber ebony fruit/*tindukam* (*Diospyros embryopteris* Pers.) is effective in treating kapha and pitta, astringent, sweet and light. The emblic myrobalan/*amalaka* (*Emblica officinalis* Gaertn.) is regarded as possessing all the taste except the salt. [146-147]

The belliric myrobalan/*bibhitaka* (*Terminalia bellirica* Roxb.) is dry, sweet, astringent, acid and an excellent is effective in treating kapha and pitta and dispels the disorders of body-fluid, blood, flesh and fat. [148]

The pomegranate/*dadima* (*Punica granatum* Linn.) is effective in treating hoarseness of voice, hyper-secretion of mucus, and disorders of pitta and vata. It is sweet, astringent and sour in taste, an appetizer, unctuous, hot, cordial and not antagonistic to kapha and pitta. The pomegranate which is dry and acid aggravates pitta and vata, the sweet one is effective in treating pitta. So, the qualities of pomegranate are described first. [149-151]

The kokum-butter fruit/*vrikshamlam* (*Garcinia indica* Choisy) is an astringent, dry and hot and is good for vata and kapha disorders. The ripe tamarind/*amlika* (*Tamarindus indica* Linn.) fruit is slightly different in quality. The amlavetasa (*Hippophae rhamnoides* sub sp. *salicifolia*) also possesses the same qualities and is a laxative. [152]

The filament of the citron flower/*matulunga* (*Citrus medica* Linn.) is indicated in intestinal colic, anorexia, constipation, weak digestive fire, chronic alcoholism, hiccups, dyspnea, cough, vomiting, disorders of stools and in all diseases born of vata and kapha. The filament of the citron is light but the rest of the parts are heavy. [153-154]

The long zedoary/*karchuh* (*Curcuma zedoaria* Rosc.) fruit, without the rind, is palatable, appetizing, cordial, fragrant, is effective in treating kapha and vata and is beneficial in cases of dyspnea, hiccup and piles. [155]

The common orange fruit/*nagarangaphala* (*Citrus reticulata* Blanco) is sweet, slightly sour, cordial, appetizer, difficult to digest, is effective in treating vata and is heavy to digest. [156]

The almond (*Prunus amygdalus* Batsch. Variety *sativa* (sweet)), green almond/*abhisuka* (*Pistacia vera* Linn.), walnut/*akshota* (*Juglans regia* Linn.), edible pine/*Mukulaka* (*Baliospermum montanum* (Willd.) Muell-Arg), *chilgoza* pine/*nikochaka* (*Pinus gerardiana wallich.*) , and apricot/*urumana*(*Prunus armeniaca* Linn.), are heavy to digest, hot in potency, unctuous, sweet, strengthening, are effective in curing vata, nourishing, aphrodisiac and aggravate kapha and pitta. Buchanan's mango/*priyala* (*Buchanania lanza* Spreng) should be considered similar in action to the above except in the qualities of being hot. [157-158]

The sabestan plum / *shleshmantakaphala* (*Cordia dichotoma* Forst.f.) increases kapha, is sweet, cold in potency and heavy. The alangy / *ankotaphala* (*Alangium salvifolium* (Linn. F.) Wang.) increases kapha, is heavy, delayed in the intestines, and is effective in treating excessive heat. [159]

The *shami* fruit *Prosopis spicigera* Linn.) is heavy, hot, sweet, dry and depilatory, while the fruit of the Indian beech/*karanja* (*Pongamia pinnata* Pierre) is moves slowly through the intestines and is not adverse to vata and kapha. [160]

The Indian hog-plum/*amrataka* (*Spondias pinnata* (Linn.f) Kurz), lemon/*Dantashatha* (*Citrus limon* (Linn.) Burm.f.), bengal currant/*karamardaka* (*Carissa spinarum* Linn.), and common orange/*airavata* (*Citrus sinensis* (Linn.) Osbeck) are sour and cause *raktapitta*. [161]

The eggplant/aubergine/brinjal /*vartaku* (*Solanum melongena* Linn.) is effective in treating vata, is an appetizer, and is pungent and bitter. The Boxwood gardenia/*parpatakaphala* (*Gardenia latifolia* Ait) fruit aggravates vata and is effective in treating kapha and pitta. [162]

The *akshiki* fruit (*Morinda tinctoria* Roxb.), is effective in treating pitta and kapha, is sour in taste and increases vata. The fruits of the holy fig/*ashvattha* (*Ficus religiosa* Linn.), country fig/*udumbaraphala* (*Ficus glomerata* Roxb.), yellow barked fig/*plaksha*(*Ficus lacor* Buch- Ham) and banyan/ *nyagrodhaphala*(*Ficus benghalensis* Linn.)are sweet, sour after digestion, is effective in treating pitta and kapha, astringent, sweet and sour in taste, promotive of vata and heavy. [163-164]

The marking-nut/*bhallataka* (*Semecarpus anacardium* Linn.f) is caustic like fire but the pulp of the fruit is sweet and cold in potency. Thus, is described the fifth section about fruits generally in use. [165]

### *Class of green herbs*

अथहरितवर्गः-

रोचनंदीपनंवृष्यमाद्रकंविश्वभेषजम्।

वातश्लेष्मविबन्धेषुरसस्तस्योपदिश्यते ॥ १६६ ॥  
 रोचनोदीपनस्तीक्ष्णः सुगन्धिर्मुखशोधनः ।  
 जम्बीरः कफवातधनः क्रिमिघ्नोभक्तपाचनः ॥ १६७ ॥  
 बालंदोषहरं, वृद्धंत्रिदोषं, मारुतापहम् ।  
 स्निग्धसिद्धं, विशुष्कंतुमूलकंकफवातजित् ॥ १६८ ॥  
 हिक्काकासविषश्वासपाश्वरशूलविनाशनः ।  
 पितकृत्कफवातधनः सुरसः पूतिगन्धहा ॥ १६९ ॥  
 यवानीचार्जकश्चैवशिगुशालेयमृष्टकम् ।  
 हृदयान्यास्वादनीयानि पितमुत्क्लेशयन्ति च ॥ १७० ॥  
 गण्डीरोजलपिप्पल्यस्तुम्बरुः शृङ्गवेरिका ।  
 तीक्ष्णोष्णकटुरुक्षाणिकफवातहराणिच ॥ १७१ ॥  
 पुंस्त्वधनः कटुरुक्षोष्णोभूस्तृणोवक्रशोधनः ।  
 खराहवाकफवातधनीबस्तिरोगरुजापहा ॥ १७२ ॥  
 धान्यकंचाजगन्धाच सुमुखश्चेतिरोचनाः ।  
 सुगन्धानातिकटुकादोषानुत्क्लेशयन्ति च ॥ १७३ ॥  
 ग्राहीगृञ्जनकस्तीक्ष्णोवातश्लेष्मार्शसांहितः ।  
 स्वेदनेऽभ्यवहारेचयोजयेत्तमपित्तिनाम् ॥ १७४ ॥  
 श्लेष्मलोमारुतधनश्चपलाण्डुर्नचपित्तनुत् ।  
 आहारयोगीबल्यश्चगुरुवृष्योऽथरोचनः ॥ १७५ ॥  
 क्रिमिकुष्ठकिलासधनोवातधनोगुल्मनाशनः ।  
 स्निग्धश्चोष्णश्चवृष्यश्चलशुनः कटुकोगुरुः ॥ १७६ ॥  
 शुष्काणिकफवातधनान्येतान्येषांफलानिच ।  
 हरितानामयं चैषषण्ठोवर्गः समाप्यते ॥ १७७ ॥  
 इति हरितवर्गः ॥ ४ ॥  
 atha haritavargaḥ-  
 rōcanam dīpanam vṛṣyamārdrakam viśvabhēṣajam|  
 vātaślēshmavibandhēṣu rasastasyōpadiṣyatē||166||  
 rōcanō dīpanastīkṣṇāḥ sugandhirmukhaśōdhanāḥ|

jambīraḥ kaphavātaghnah krimighnō bhaktapācanah||167||  
bālam dōṣaharam, vṛddham tridōṣam, mārutāpaham|  
snigdhasiddham, viśuṣkam tu mūlakam kaphavātajit||168||  
hikkākāsaviṣaśvāsapārśvaśūlavinaśanah|  
pittakṛt kaphavātaghnah surasah pūtigandhahā||169||  
yavānī cārjakaścaiva śigruśālēyamṛṣṭakam|  
hṛdyānyāsvādanīyāni pittamutklēśayanti ca||170||  
gaṇḍīrō jalapippalyastumbaruḥ śṛṅgavērikā|  
tīkṣṇōṣṇakatūrkṣāṇi kaphavātaharāṇi ca||171||  
puṁstvaghnah kaṭurūkṣōṣṇō bhūstrṇō vakrasōdhanaḥ|  
kharāhvā kaphavātaghnī bastirōgarujāpahā||172||  
dhānyakam cājagandhā ca sumukhaśceti rōcanāḥ|  
sugandhā nātikatukā dōṣānutklēśayanti ca||173||  
grāhī gr̥ījanakastīkṣṇō vātaślēsmārśasām hitah|  
svēdanē'bhyavahārē ca yōjayēttamapittinām||174||  
ślēśmalō mārutaghnaśca palāṇdurna ca pittanut [1] |  
āhārayogī balyaśca gururvṛṣyō'tha rōcanah||175||  
krimikuṣṭhakilāsaghnō vātaghnō gulmanāśanah|  
snigdhaścōṣṇaśca vṛṣyaśca laśunah kaṭukō guruḥ||176||  
śuṣkāṇi kaphavātaghnānyētānyēśām phalāni ca|  
haritānāmayam caiṣa ṣaṣṭhō vargaḥ samāpyatē||177||  
iti haritavargaḥ  
atha haritavargaH-  
rocanaM dlpanaM vRuShyamArdrakaM viSvaBeShajam|  
vAtaSleShmavibandheShu rasastasyopadiSyate||166||  
rocano dlpanastlkShNaH sugandhirmuKaSodhanaH|  
jambīraH kaPavAtaGnaH krimiGno BaktapAcanaH||167||  
bAlaM doShaharaM, vRuddhaM tridoShaM, mArutApaham|

snigdhasiddhaM, viSuShkaM tu mUlakaM kaPavAtajit||168||  
 hikkAkAsaviShaSvAsapArSvaSUlavinASanaH|  
 pittakRut kaPavAtaGnaH surasaH pUtidandhahA||169||  
 yavAnI cArjakaScaiva SigruSAleyamRuShTakam|  
 hRudyAnyAsvAdanlyAni pittamutkleSayanti ca||170||  
 gaNDIro jalapippalyastumbaruH SRu~ggaverikA|  
 tlkShNoShNakaTurUkShANi kaPavAtaharANi ca||171||  
 puMstvaGnaH kaTurUkShoShNo BUstRuNo vakraSodhanaH|  
 KarAhvA kaPavAtaGnI bastirogarujApahA||172||  
 dhAnyakaM cAjagandhA ca sumuKaSceti rocanAH|  
 sugandhA nAtikaTukA doShAnutkleSayanti ca||173||  
 grAhI gRu~jjanakastlkShNo vAtaSleShmArSasAM hitaH|  
 svedane&ByavahAre ca yojayettamapittinAm||174||  
 SleShmalo mArutaGnaSca palANDurna ca pittanut |  
 AhArayogl balyaSca gururvRuShyo&tha rocanAH||175||  
 krimikuShThakilAsaGno vAtaGno gulmanASanaH|  
 snigdhaScoShNaSca vRuShyaSca laSunaH kaTuko guruH||176||  
 SuShkANi kaPavAtaGnAnyetAnyeShAM PalAni ca|  
 haritAnAmayaM caiSha ShaShTho vargaH samApyate||177||  
 iti haritavargaH||4||

Now begins the section on greens. The green ginger/*adraka* (*Zingiber officinale Rosc.*) is an appetizer, digestion-stimulant, aphrodisiac and its juice is prescribed in cases of obstruction due to vata and kapha. [166]

The lemon/ *jambira* (*Citrus limon* (Linn.) Burm.F) is appetizer, digestive-stimulant, acute fragrant, mouth cleanser, is effective in treating kapha and vata, vermicide and helps the digestion of food. [167]

The garden radish/*mulaka* (*Raphanus sativus Linn.*) when tender allays vitiated dosha, but when overgrown, provokes these dosha. When prepared with unctuous substances it alleviates vata. And when dried, it alleviates kapha and vata. [168]

The holy basil/*surasa* (*Ocimum sanctum* Linn.) is effective in treating hiccups, cough, poison, dyspnea, pleural effusion, kapha and vata, and eliminates fetor. It, however, aggravates pitta .[169]

Carum/*yavani* (*Trachyspermum ammi* (Linn.) sprague), shrubby basil/*arjaka* (*Orthosiphon pallidus* Royle), drumstick/*shigru* (*Moringa oleifera* Lam), small variety of radish /*shaleya* (*Raphanus sativus* Linn.), and brown mustard/*mristaka* (*Brassica juncea* (Linn.) Czern. & Coss) are cordial, palatable and excite the pitta. [170]

The *gandira* (*Coleus barbatus* Benth.), the hog fruit/*jalapippali* (*Lippia nodiflora* Rich.), Indian toothache/*tumbaru* (*Zanthoxylum armatum* DC), and green coriander/*sringaverika* (*Coriandrum sativum* Linn.) are acute, hot, pungent, dry and are effective in curing kapha and vata. [171]

The ginger grass/*bhustrina* (*Hyptis suaveolens* (Linn.) Poit) is an aphrodisiac, pungent, dry, hot, and useful as a mouth cleanser. Celery seeds/*kharahva* (Carum *roxburghianum* (D.C.) Benth. & Hk.f.) are effective in curing kapha and vata and painful urinary disorders. [172]

Coriander/*dhanyaka* (*Coriandrum sativum* Linn.), wild thyme/*ajagandha* (*Thymus serpyllum* Linn.) and *sumukha* (*Ocimum sp.*) are appetizers, fragrant, not very pungent, and further aggravate morbid *dosha* conditions [173]

The leek/*grinjanaka* (*Allium ameloprasum* Hook.f. non Linn.) is an astringent, acute and beneficial in vata and kapha disorders and in piles. This should be used in sudation therapy and as an article of diet by those who are not suffering from pitta-discordance. [174]

The onion/*palandu* (*Allium cepa* Linn) promotes kapha and is effective in treating vata but not of pitta. It is a good adjuvant for food and is a strength-enhancer, heavy, aphrodisiac and appetizing. [175]

The garlic/*lashuna* (*Allium sativum* Linn.) is effective in treating worms, dermatosis including leprosy, vata disorders and *gulma*. It is unctuous, hot, aphrodisiac, pungent and heavy. [176]

These in their dried condition and their fruits are effective in curing kapha and vata. Thus, ends the sixth section on greens. [177]

#### *Class of wines and alcoholic preparations*

अथमद्यवर्गः-

प्रकृत्यामद्यमम्लोष्णमम्लंचोक्तविपाकतः।

सर्वसामान्यतस्तस्यविशेषउपदेक्ष्यते॥१७८॥

atha madyavargah-

prakṛtyā madyamamlōṣṇamamlam cōktam vipākataḥ।

sarvar̥m sāmānyatastasya viśeṣa upadēksyatē||178||

atha madyavargaH-

prakRutyA madyamamloShNamamlam coktaM vipAkataH||

sarvaM sAmAnyatastasya viSeSha upadekShyate||178||

The general qualities of wine:

Now begins the group of wines. Wine is naturally sour (in taste and digestion) and hot in potency. This is its general property. Its specific characteristics will now be described.

[178]

कृशानंसक्तमूत्राणांग्रहण्यर्शोविकारिणाम्।

सुराप्रशस्तावात्धनीस्तन्यरक्तक्षयेषुच॥१७९॥

हिक्काश्वासप्रतिश्यायकासवर्चोग्रहारुचौ।

वम्यानाहविबन्धेषुवात्धनीमदिराहिता॥१८०॥

शूलप्रवाहिकाटोपकफवातार्शसांहितः।

जगलोग्राहिरुक्षोष्णःशोफद्नोभक्तपाचनः॥१८१॥

शोषार्शोग्रहणीदोषपाण्डुरोगारुचिज्वरान्।

हन्त्यरिष्टःकफकृतान्नोगान्नोचनदीपनः॥१८२॥

मुखप्रियःसुखमदःसुगन्धिर्बस्तिरोगनुत्।

जरणीयःपरिणतोहृदयोवर्ण्यश्चशार्करः॥१८३॥

रोचनोदीपनोहृदयःशोषशोफार्शसांहितः।

स्नेहश्लेष्मविकारध्नोवर्ण्यःपक्वरसोमतः॥१८४॥

जरणीयोविबन्धधनःस्वरवर्णविशोधनः।

लेखनःशीतरसिकोहितःशोफोदरार्शसाम्॥१८५॥

सृष्टभिन्नशकृद्वातोगौडस्तर्पणदीपनः।

पाण्डुरोगव्रणहितादीपनीचाक्षिकीमता॥१८६॥

सुरासवस्तीव्रमदोवात्धनोवदनप्रियः।

छेदीमध्वासवस्तीक्ष्णोमैरेयोमधुरोगुरुः॥१८७॥

धातक्याऽभिषुतोहृदयो रुक्षोरोचनदीपनः।

माध्वीकवन्न चात्युष्णोमृद्वीकेक्षुरसासवः॥१८८॥

रोचनंदीपनंहृदयंबल्यंपिताविरोधिच।  
 विबन्धघनंकफघनंचमधुलघवल्पमारुतम्॥१८९॥  
 सुरासमण्डारुक्षोष्णायवानांवातपितला।  
 गुर्वीजीर्यतिविष्टभ्यश्लेष्मलातुमधूलिका॥१९०॥  
 दीपनंजरणीयंचहृत्पाणुक्रिमिरोगनुत्।  
 ग्रहण्यशौहितभेदिसौवीरकतुषोदकम्॥१९१॥  
 दाहज्वरापहस्पर्शात्पानादवातकफापहम्।  
 विबन्धघनमवसंसिदीपनंचाम्लकाञ्जिकम्॥१९२॥  
 प्रायशोऽभिनवंमद्यंगुरुदोषसमीरणम्।  
 स्नोतसांशोधनंजीर्णदीपनंलघुरोचनम्॥१९३॥  
 हर्षणंप्रीणनंमद्यंभयशोकश्रमापहम्।  
 प्रागल्भ्यवीर्यप्रतिभातुष्टिपुष्टिबलप्रदम्॥१९४॥  
 सात्त्विकैर्विधिवद्युक्त्यापीतंस्यादमृतंयथा।  
 वर्गोऽयंसप्तमोमद्यमधिकृत्यप्रकीर्तिः॥१९५॥  
 इतिमद्यवर्गःसप्तमः॥७॥

kṛśānām saktamūtrāṇām grahaṇyarśōvikāriṇām|  
 surā praśastā vātaghnī stanyaraktakṣayēsu ca||179||  
 hikkāśvāsapratiśyāyakāsavarcōgrahārucau|  
 vamyānāhavibandhēsu vātaghnī madirā hitā||180||  
 śūlapravāhikāṭopakaphavātārśasāṁ hitaḥ|  
 jagalō grāhirūkṣōṣṇaḥ śōphaghno bhaktapācanah||181||  
 śōṣārśōgrahaṇīdōṣapāṇḍurōgārucijvarān|  
 hantyariṣṭaḥ kaphakṛtān rōgānrōcanadīpanah [1] ||182||  
 mukhapriyaḥ sukhamadaḥ sugandhirbastirōganut [2] |  
 jarāṇīyah pariṇatō hr̥dyo varṇyaśca sārkaraḥ||183||  
 rōcanō dīpanō hr̥dyah śōṣāsōphārśasāṁ hitaḥ|  
 snēhaślēśmavikāraghnō varṇyah pakvarasō mataḥ||184||  
 jarāṇīyō vibandhaghnaḥ svaravarṇaviśōdhanaḥ|

lēkhanaḥ sītarasikō hitaḥ śōphōdarārśasām||185||  
sṛṣṭabhinnaśakṛdvātō gaudastarpaṇadīpanah|  
pāṇḍurōgavraṇahitā dīpanī cāksikī matā [3] ||186||  
surāsavastīvramadō vātaghnō vadanapriyah|  
chēdī madhvāsavastīkṣṇō mairēyō madhurō guruḥ||187||  
dhātakyā'bhiṣutō hṛdyō [4] rūkṣō rōcanadīpanah|  
mādhvīkavanna [5] cātyuṣṇō mṛdvīkēkṣurasāsavah||188||  
rōcanam dīpanam hṛdyam balyam pittāvirōdhi ca|  
vibandhaghnam kaphaghnam ca madhu laghvalpamārutam||189||  
surā samanḍā rūkṣoṣṇā yavānām vātapittalā|  
gurvī jīryati viṣṭabhya ślēśmalā tu madhūlikā||190||  
dīpanam jaraṇīyam ca hṛtpāṇḍukrimirōganut|  
grahaṇyarśōhita bhēdi sauvīrakatuśōdakam||191||  
dāhajvarāpaham sparśāt pānādvātakaphāpaham|  
vibandhaghnamavasramsi dīpanam cāmlakāñjikam||192||  
prāyaśō'bhinavam madyam gurudōṣasamīraṇam|  
srōtasām śōdhanam jīrṇam dīpanam laghu rōcanam||193||  
harṣaṇam prīṇanam madyam bhayaśōkaśramāpaham|  
prāgalbhavīryapratibhātuṣṭipuṣṭibalapradam||194||  
sāttvikairvidhivadyuktyā pītam syādamṛtam yathā|  
vargō'yam saptamō madyamadhiķrya prakīrtitah||195||  
iti madyavargaḥ saptamaḥ  
kRuSAnAM saktamUtrANAM grahaNyarSovikAriNAm|  
surA praSastA vAtaGnI stanyaraktakShayeShu ca||179||  
hikkASvAsapratiSyAyakAsavarcograhArucau|  
vamyAnAhavibandheShu vAtaGnI madirA hitA||180||  
SUlapravAhikATopakaPavAtArSasAM hitaH|  
jagalo grAhiRukShoShNaH SoPaGno BaktapAcanaH||181||

SoShArSograhaNIdoShapANDurogAruciJvarAn|  
hantyariShTaH kaPakRutAn rogAnrocanadlpanaH ||182||  
muKapriyaH suKamadaH sugandhirbastiroganut |  
jaraNIyaH pariNato hRudyo varNyaSca SArkaraH||183||  
rocano dlpano hRudyaH SoShaSoPArSasAM hitaH|  
snehaSleShmavikAraGno varNyaH pakvaraso mataH||184||  
jaraNIyo vibandhaGnaH svaravarNaviSodhanaH|  
leKanaH SItarasiko hitaH SoPodarArSasAm||185||  
sRuShTaBinnaSakRudvAto gauDastarpaNadlpanaH|  
pANDurogavraNahitA dlpanI cAkShikI matA ||186||  
surAsavastlvramado vAtaGno vadanaPRIyaH|  
Cedi madhvAsavastIkShNo maireyo madhuro guruH||187||  
dhAtakyA&BiShuto hRudyo rUkSho rocanadlpanaH|  
mAdhvikavanna cAtyuShNo mRudvlkekShurasAsavaH||188||  
rocanAM dlpanaM hRudyaM balyaM pittAvirodhi ca|  
vibandhaGnaM kaPaGnaM ca madhu laGvalpamArutam||189||  
surA samaNDA rUkShoShNA yavAnAM vAtapittalA|  
gurvl jlryati viShTaBya SleShmaIA tu madhUlikA||190||  
dlpanaM jaraNIyaM ca hRutpANDukrimiroganut|  
grahaNyarSohita Bedi sauvlrakatuShodakam||191||  
dAhajvarApahaM sparSAT pAnAdvAtakaPApaham|  
vibandhaGnamavasraMsi dlpanaM cAmlakA~jjikam||192||  
prAyaSo&BinavaM madyaM gurudoShasamIraNam|  
srotasAM SodhanaM jlNaM dlpanaM laGu rocanam||193||  
harShaNaM prINanaM madyaM BayaSokaSramApaham|  
prAgalByavlryapratiBAtuShTipuShTibalapradam||194||  
sAttvikairvidhividhivadyuktyA pltaM syAdamRutaM yathA|  
vargo&yaM saptamo madyamadhikRutya praklrtitaH||195||

iti madyavargaH saptamaH||7||

The *sura* wine is recommended in cases of emaciation, suppression of urine, assimilation-disorders, piles, deficiency of milk and blood, and is effective in treating vata. [179]

The *madira* wine is beneficial in hiccups, dyspnea, coryza, cough, scybalous stools, anorexia, vomiting, constipation and is effective in treating vata. [180]

The *jagala* wine is beneficial in colic, dysentery, abdominal distension/borborygmi, kapha,vata and piles. It is an astringent, dry in property, hot in potency, effective in treating edema and stimulates digestion. [181]

The *arishta* or medicated wine is effective in treating consumption, piles, assimilation-disorders, anemia, anorexia, fever and other diseases when these arise from kapha. It is an effective appetizer. [182]

Sugar wine is palatable and a mild intoxicant. It is fragrant, effective in treating painful urinary disorders, promotes digestion, improves complexion, and is also a cardiac tonic. [183]

The *pakvarasa* wine is an appetizer, beneficial in consumption, complexion, edema and piles, and is an effective medication for treating kapha-disorders and disorders born of the overuse of unctuous articles. [184]

The *shitarasika* wine is a good appetizer, effective in treating constipation, and in improving/enhancing voice and complexion. It is also a *lekhana* (weight-loss medication) and is beneficial in treating edema, abdominal afflictions and piles. [185]

*Gud* (jaggery, or coarse, unrefined sugar) wine is a refreshing, nourishing drink that is also a very good appetizer. It is beneficial in treating wounds since it has antiseptic properties. [186]

The *surasava* wine is very strong (creating severe intoxication), effective in treating vata and palatable. The *madhvasava* is depletive and sharp and the *maireya* wine is sweet and heavy. [187]

Fire-flame bush/*dhatakyasava* (*Woodfordia fruticosa* Kurz.) wine is mild, dry, and appetizing. Grape and sugar wines are similar but not as hot. [188]

The honey wine is a light, appetizing and strengthening drink. It does not provoke the pitta, and is an effective tonic for treating constipation and kapha. However, it slightly increases vata. [189]

*Suramanda* wine (consumed undistilled/without filtering) made out of barley is dry, hot, increases vata and pitta, is heavy and delays digestion and *madhulika* wine increases kapha dosha. [190]

*Sauviraka* and *tushodaka* wines are very effective appetizers and laxatives. These are also very beneficial in treating cardiac disorders, anemia and worms, assimilation-disorders and piles. [191]

The sour-congee wine, when topically applied, is effective in treating burning sensation and fever. In the form of potion, it is very effective in treating vata, kapha and constipation (it is a laxative and digestive stimulant). [192]

Fresh wine is generally heavy and aggravates the dosha, while old wine clears the body channels and, digestive-stimulant. Wine is exhilarating, pleasant, strengthening and relieves fear, grief and fatigue. It gives courage, virility, mental exaltation, satisfaction, plumpness and vitality. If it is taken by virtuous men in proper manner, it acts like nectar. Thus, the seventh section concerning wines has been described. [193-195]

#### *Class of water*

अथजलवर्गः-

जलमेकविधंसर्वपत्यैन्द्रंनभस्तलात्।

तत् पतत्पतितंचैवदेशकालावपेक्षते॥१९६॥

खात् पतत्सोमवायर्वक्तःस्पृष्टंकालानुवर्तिभिः।

शीतोष्णस्त्रिनग्धरुक्षाद्यैर्यथासन्नंमहीगुणैः॥१९७॥

atha jalavargaḥ-

jalamekavidham sarvam patatyaindram nabhastalat|196|

tat [1] patat patitam caiva deśakālāvapēkṣatē||196||

khāt [3] patat sōmavāyvarkaiḥ spr̄ṣṭam kālānuvartibhiḥ|

śītōṣṇasnidharūkṣādyairyathāsannam mahīguṇaiḥ||197||

atha jalavargaH-

jalamekavidhaM sarvaM patatyaindraM naBastalAt|

tat patat patitaM caiva deSakAlAvapekShate||196||

KAt patat somavAyvarkaiH spRuShTaM kAlAnuvartiBiH|

SltoShNasnidharUkShAdyairyathAsannaM mahlguNaiH||197||

Now begins the section on waters. All water is of one kind and falls from the heavens ordained by Indra. While it is falling and after it has fallen, it is affected by location and time. [196]

While falling from the sky it is influenced by the effects of the seasonal courses of the moon, the wind and the sun. When it has fallen on the earth, it is affected by the qualities of the earth on which it falls and these could be cold, hot, viscid, dry, etc. [197]

शीतं शुचिं शिवं मृष्टं विमलं लघुषङ् गुणम्।

प्रकृत्यादिव्यमुदकं,

śītam śuci śivam mr̄ṣṭam vimalam laghu ṣadguṇam|

prakṛtyā divyamudakam,...|198|

SItaM Suci SivaM mRuShTaM vimalaM laGu ShaDguNam|

prakRutyA divyamudakaM,...

Rainwater is cold, pure, wholesome, palatable, clear, and light in digestion. These are the six qualities of rainwater. [197]

...भ्रष्टं पात्रमपेक्षते॥१९८॥

श्वेतेकषायं भवति पाण्डरे स्यात् तिक्तकम्।

कपिलेक्षारसं सृष्टमूषरे लवणा निवितम्॥१९९॥

कटु पर्वतविस्तारे मधुरं कृष्णमृतिके।

एतत्षाङ्गुण्यमाख्यातं महीस्थस्य जलस्य हि।

तथाऽव्यक्तरसं विद्यादैन्द्रं कारं हिमं चयत्॥२००॥

यदन्तरीक्षात् पतती न्द्रसृष्टं

चोक्तैश्च पात्रैः परिगृह्यते ऽम्भः।

तदैन्द्रमित्येव वदन्ति धीरा

न रेन्द्रपेयं सलिलं प्रधानम्॥२०१॥

ईषत्कषायमधुरं सुसृक्षमं विशदं लघु।

अरूक्षमनभिष्यन्दिसर्वपानीयमुत्तमम्॥२०२॥

गुर्वभिष्यन्दिपानीयं वार्षिकं मधुरं नवम्।

तनुलघ्वनभिष्यन्दिप्रायः शरदिवर्षति॥२०३॥

तनुये सुकुमाराः स्युः स्निग्धभूयिष्ठभोजनाः।

तेषां भोजयेच भक्षयेच लेहयेपेयेच शस्यते॥२०४॥

हेमन्तेसलिलं स्निग्धं वृष्यं बलहितं गुरु।

किञ्चित्तोलघुतरं शिरेकफवात् जित्॥२०५॥

कषायमधुरं रुक्षं विद्याद् वासन्ति कं जलम् ।  
ग्रैष्मि कं त्वनभिष्यन्दि जलमि त्येव निश्चयः ॥

ऋता वृता विहाख्याता: सर्वएवाम्भसो गुणाः ॥ २०६ ॥

विभ्रान्ते षुतु काले षुयत्प्रयच्छन्ति तोयदाः ।  
सलिलं ततु दोषाय युज्यते नात्र संशयः ॥ २०७ ॥

राजभीराजमा त्रैश्च सुकुमारैश्च मानवैः ।  
सुगृहीताः शरद्यापः प्रयोक्तव्याविशेषतः ॥ २०८ ॥

...bhraṣṭāṁ pātrama pēkṣatē||198||

śvētē kaṣāyam bhavati pāṇḍarē syāttu tiktakam|  
kapilē kṣārasaṁ sr̄ṣṭamūṣarē lavaṇānvitam||199||

kaṭu parvatavistārē [1] madhuraṁ kṛṣṇamṛttikē|  
ētat ṣādgunyamākhyātāṁ mahīsthasya jalasya hi|

tathā'vyaktarasāṁ vidyāda in draṁ kāraṁ himaṁ ca yat||200||

yadanta rīkṣāt patatīndrasr̄ṣṭāṁ cōktaiśca pātraiḥ parigrhyatē'mbhaḥ|  
tada in dra mityēva vadanti dhīrā narēndrapēyāṁ salilaṁ pradhānam [2] ||201||

īsatkaṣāyam adhuraṁ susūkṣmaṁ viśadaṁ laghu|  
arūkṣamanabhiṣyandi sarvaṁ pānīya muttamam||202||

gurvabhiṣyandi pānīyaṁ vārṣikāṁ madhuraṁ navam|  
tanu laghvanabhiṣyandi prāyah śaradi varṣati||203||

tattu yē suku mārāḥ syuḥ snigdhabhūyiṣṭhabhōjanāḥ|  
tēṣāṁ bhōjyē ca bhakṣyē ca lēhyē pēyē ca śasyatē||204||

hēmantē salilaṁ snigdhaṁ vṛṣyaṁ balahitaṁ guru|  
kiñcittatō laghutaram śiśire kaphavātajit||205||

kaṣāyam adhuraṁ rūkṣaṁ vidyādvāsantikaṁ jalām|  
graismikāṁ tva nabhiṣyandi jalāmityēva niścayaḥ|

ṛtāvṛtāvihākhyātāḥ sarva ēvāmbhasō guṇāḥ||206||

vibhrāntēsu tu kālēsu yat prayacchanti tōyadāḥ|  
salilaṁ tattu dōṣāya yujyatē nātra saṁśayaḥ||207||

rājabhī rājamātraiśca sukumāraiśca mānavaiḥ|  
sugṛhītāḥ śaradyāpah prayōktavyā viśēṣataḥ||208||  
...BraShTaM pAtramapekShate||198||

Svete kaShAyaM Bavati pANDare syAttu tiktakam|  
kapile kShArasaMsRuShTamUShare lavaNAnvitam||199||

kaTu parvatavistAre madhuraM kRuShNamRuttike|  
etat ShADguNyamAKyAtaM mahlsthasya jalasya hi|  
tathA&vyaktarasamM vidyAdaindraM kAraM himaM ca yat||200||

yadantarIkShAt patatIndrasRuShTaM  
coktaisca pAtraiH parigRuhya te&mBaH|  
tadaindrāmityeva vadanti dhIrA  
narendrapeyaM salilaM pradhAnam ||201||

|ShatkaShAyamadhuraM susUkShmaM viSadaM laGu|  
arUkShamanaBiShyandi sarvaM pAnlyamuttamam||202||

gurvaBiShyandi pAnlyaM vArShikaM madhuraM navam|  
tanu laGvanaBiShyandi prAyaH Saradi varShati||203||

tattu ye sukumArAH syuH snigdhaBUyiShThaBojanAH|  
teShAM Bojye ca BakShye ca lehye peye ca Sasyate||204||

hemante salilaM snigdhaM vRuShyaM balahitaM guru|  
ki~jcittato laGutaraM SiSire kaPavAtajit||205||

kaShAyamadhuraM rUkShaM vidyAdvAsantikaM jalam|  
graiShmikaM tvanaBiShyandi jalamityeva niScayaH||

RutAvRutAvihAKyAtAH sarva evAmBaso guNAH ||206||

viBrAnteShu tu kAleShu yat prayacCanti toyadAH|  
salilaM tattu doShAya yujyate nAtra saMSayaH||207||

rAjaBI rAjamaatraisca sukurAraiSca mAnavaiH|  
sugRuhItAH SaradyApaH prayoktavyA viSeShataH||208||

Changes in the properties of water based upon the properties of the surface it is in contact with:

Some properties of water change when it falls onto the earth. When it falls on white earth it acquires an astringent taste, on yellowish-white earth it becomes bitter, on tawny earth it becomes alkaline, and on brine earth it becomes salty. Water flowing from the mountains becomes pungent and when it falls on black earth it becomes sweet. These are the six qualities acquired by water coming in contact with the earth, Celestial water hailstone and snow – in their natural form - have an indistinct taste. [198-200]

Sages and wise people called rainwater as celestial water that is showered from the sky by Indra (the Vedic King of all Gods). This is the best kind of water and is ideal for consumption. [201]

All water which is slightly astringent and sweet, subtle, clear, light, neither unctuous nor deliquescent is considered excellent. [202]

Rainwater that falls during the rainy (or monsoon) season in India, when fresh, is heavy, viscid, and sweet. The autumnal rain-water is mainly thin, light, and not viscid. [203]

Rainwater is recommended for use as a supplement or an ingredient for making food, electuaries (a lickable substance mixed with honey or another sweet substance), and drinks for those who are delicate and habituated to eating very unctuous food.[204]

The late-autumnal water is unctuous, aphrodisiac, conducive to strength, and heavy. The winter water is slightly lighter and alleviates kapha and vata. [205]

Spring water is to be considered to be an astringent, is sweet and dry. Summer water is not greasy (*anabhishyandi*). Thus, the properties of water according to each and every season have been studied by sages and described here. [206]

Unseasonal rains bring about dosha imbalance. There is no doubt regarding this. [207]

Kings, members of the royalty or privileged upbringing, and people of the delicate constitution should collect autumnal waters and use them mainly. [208]

नद्यःपाषाणविच्छिन्नविक्षुब्धाभिहतोदकाः ।

हिमवत्प्रभवाःपथ्याःपुण्यादेवर्षिसेविताः॥२०९॥

नद्यःपाषाणसिकतावाहिन्योविमलोदकाः।

मलयप्रभवायाश्चजलंतास्वमृतोपमम्॥२१०॥

पश्चिमाभिमुखायाश्चपथ्यास्तानिर्मलोदकाः।

प्रायोमृदुवहागुव्योर्याश्चपूर्वसमुद्रगाः॥२११॥

पारियात्रभवायाश्चविन्द्यसहयभवाश्चयाः।

शिरोहृद्रोगकुष्ठानांताहेतुःश्लीपदस्यच॥२१२॥

nadyah pāśāṇavicchinnavikṣubdhābhīhatōdakāḥ [1] |  
 himavatprabhavāḥ pathyāḥ punyā dēvarśisēvitāḥ||209||  
 nadyah pāśāṇasikatāvāhinyō vimalōdakāḥ|  
 malayaprabhavā yāśca jalāṁ tāsvamṛtōpamam||210||  
 paścimābhīmukhā yāśca pathyāstā nirmalōdakāḥ|  
 prāyō mṛduvahā gurvyō yāśca pūrvasamudragāḥ||211||  
 pāriyātrabhavā yāśca vindhyasahyabhadraśca yāḥ|  
 śirōhṛdrōgakuṣṭhānāṁ tā hētuḥ ślīpadasya ca||212||  
 nadyaH pAShANavicCinnavikShubdhABihatodakAH |  
 himavatpraBavAH pathyAH puNyA devarShisevitAH||209||  
 nadyaH pAShANasikatAvAhinyo vimalodakAH|  
 malayapraBavA yASca jalaM tAsvamRutopamam||210||  
 paScimABimuKA yASca pathyAstA nirmalodakAH|  
 prAyo mRuduvahA gurvyo yASca pUrvasamudragAH||211||  
 pAriyAtraBavA yASca vindhyasahyaBavASca yAH|  
 SirohRudrogakuShThAnAM tA hetuH SIlipadasya ca||212||

The properties of river water from the mountains:

The water of rivers that originate from the Himalayas, whose flow is broken, agitated, and obstructed by rocks, and on whose banks dwell Gods and Rishis is considered wholesome and holy. The water of the rivers originating from the Malaya mountains, which carry stones and sand in their course, is pure and is like nectar. [209-210]

The water of rivers flowing westward is considered wholesome and pure while that of the slow-flowing ones towards the eastern seas is generally heavy. [211]

The waters of rivers originating from the Pariyatra, Vindhya, or Sahya mountains cause diseases of the head and the heart, dermatosis, and elephantiasis. [212]

वसुधाकीटसर्पाखुमलसन्दूषितोदकाः।  
 वर्षाजलवहाननद्यःसर्वदोषसमीरणाः॥२१३॥  
 वापीकूपतडागोत्ससरःप्रसवणादिषु।  
 आनूपशैलधन्वानांगुणदोषैर्विभावयेत्॥२१४॥  
 पिच्छिलंक्रिमिलंकिलन्नंपर्णशैवालकर्दमैः।

विवर्णविरसंसान्द्रंदुर्गन्धंनहितंजलम्॥२१५॥

विसंत्रिदोषंलवणमन्बुयद्वरुणालयम्।

इत्यन्बुवर्गःप्रोक्तोऽयमष्टमःसुविनिश्चितः॥२१६॥

vasudhākīṭasarpākhumalasandūṣitōdakāḥ|

varṣājalavahā nadyah sarvadōśasamīraṇāḥ||213||

vāpīkūpataḍāgōtsasaraḥprasravaṇādiṣu|

ānūpaśailadhanvānāṁ guṇadōśairvibhāvayēt||214||

picchilāṁ krimilāṁ klinnāṁ parṇāśaivālakardamaiḥ|

vivarṇāṁ virasāM sāndram durgandhaM na hitaM jalāM||215||

visraM tridōṣāM lavaṇamambu yadvaruṇālayam|

ityambuvargah prōktō'yamaṣṭamah suviniścitaḥ||216||

vasudhAkITasarpAKumalasandUShitodakAH|

varShAjalavahA nadyaH sarvadoShasamIraNAH||213||

vAplkUpataDAgotsasaraHprasravaNAdiShu|

AnUpaSailadhanvAnAM guNadoShairviBAvayet||214||

picCilaM krimilaM klinnaM parNaSaivAlakardamaiH|

vivarNaM virasaM sAndraM durgandhaM na hitaM jalāM||215||

visraM tridoShaM lavaNamambu yadvaruNAlayam|

ityambuvargaH prokto&yamaShTamaH suviniScitaH||216||

The waters of the rivers that flow during the rainy season and are polluted by earthworms, serpents, mice, excrement and aggravate all the three dosha. [213]

The qualities of the waters of tanks, wells, ponds, springs, lakes and cascades should be classified according to their locations - in wetland, mountainous lands and arid land. [214]

The water which is slimy, insect-ridden and putrefied by leaves, moss and slush, discolored, distasteful, dense and stinking is unfit for consumption. Sea-water has the smell of raw flesh, aggravates the three doshas, and is saltish in taste. [215-216]

इतिजलवर्गोऽष्टमः॥८॥

iti jalavargō'ṣṭamah ||8||

iti jalavargo&ShTamaH||8||

Thus, the eighth section, pertaining to water, has been laid down.

*Class of milk and its varieties*

अथगोरसवर्गः-

स्वादुशीतंमृदुस्निग्धंबहलंश्लक्षणपिच्छिलम्।

गुरुमन्दंप्रसन्नंचगव्यंदशगुणंपयः॥२१७॥

तदेवइगुणमेवौजःसामान्यादभिवर्धयेत्।

प्रवरंजीवनीयानांक्षीरमुक्तंरसायनम्॥२१८॥

महिषीणांगुरुतरंगव्याच्छीततरंपयः।

स्नेहान्यूनमनिद्रायहितमत्यग्नयेचतत्॥२१९॥

रुक्षोष्णांक्षीरमुष्ट्रीणामीषत्सलवणंलघु।

शस्तंवातकफानाहक्रिमिशोफोदराशसाम्॥२२०॥

बल्यस्थैर्यकरंसर्वमुष्णांचैकशफंपयः।

साम्लंसलवणंरुक्षंशाखावातहरंलघु॥२२१॥

छागंकषायमधुरंशीतंग्राहिपयोलघु।

रक्तपित्तातिसारघ्नक्षयकासज्वरापहम्॥२२२॥

हिक्काश्वासकरंतूष्णंपित्तश्लेष्मलमाविकम्।

हस्तिनीनांपयोबल्यंगुरुस्थैर्यकरंपरम्॥२२३॥

जीवनंबृहणंसात्म्यंस्नेहनंमानुषंपयः।

नावनंरक्तपित्तेचतर्पणंचाक्षिशूलिनाम्॥२२४॥

atha gōrasavargah-

svādu śītarām mṛdu snigdham bahalaṁ ślakṣṇapicchilam|

guru mandam̄ prasannam̄ ca gavyam̄ daśaguṇam̄ payah||217||

tadēvaṅguṇamēvaujaḥ sāmānyādabhivardhayēt|

pravaram̄ jīvanīyānām kṣīramuktam̄ rasāyanam||218||

mahiṣīnām gurutaram̄ gavyācchītatarām̄ payah|

snēhānyūnamanidrāya hitamatyagnayē ca tat||219||

rūkṣōṣṇām kṣīramuṣṭrīnāmīṣatsalavaṇām laghu|

śastarṁ vātakaphānāhakrimiśōphōdarārśasām||220||  
 balyaṁ sthairyakaram̄ sarvamuṣṇam̄ caikaśapham̄ payah|  
 sāmlam̄ salavaṇam̄ rūkṣam̄ śākhāvātaharam̄ laghu||221||  
 chāgarṁ kaśāyamadhuram̄ śītam̄ grāhi payō laghu|  
 raktapittātisāraghnam̄ kṣayakāsajvarāpaham||222||  
 hikkāśvāsakaram̄ tūṣṇam̄ pittaślēśmalamāvikam|  
 hastinīnām̄ payō balyaṁ guru sthairyakaram̄ param||223||  
 jīvanam̄ bṛmhāṇam̄ sātmyaṁ snēhanam̄ mānuṣam̄ payah|  
 nāvanam̄ raktapittē ca tarpaṇam̄ cākṣiśūlinām||224||  
 atha gorasavargaH-  
 svAdu SItaM mRudu snigdhaM bahalaM SlakShNapicCilam|  
 guru mandaM prasannaM ca gavyaM daSaguNaM payaH||217||  
 tadeva~gguNamevaujaH sAmAnyAdaBivardhayet|  
 pravaraM jlvanlyAnAM kShIramuktaM rasAyanam||218||  
 mahiShINAM gurutaraM gavyAcCltataraM payaH|  
 snehAnyUnamanidrAya hitamatyagnaye ca tat||219||  
 rUkShoShNaM kShIramuShTrINAmIShatsalavaNaM laGu  
 SastaM vAtakaPAnAhakrimiSoPodarArSasAm||220||  
 balyaM sthairyakaraM sarvamuShNaM caikaSaPaM payaH|  
 sAmlaM salavaNaM rUkShaM SAKAvAtaharaM laGu||221||  
 CAgaM kaShAyamadhuraM SItaM grAhi payo laGu|  
 raktapittAtisAraGnaM kShayakAsajvarApaham||222||  
 hikkASvAsakaraM tUShNaM pittaSleShmalamAvikam|  
 hastinInAM payo balyaM guru sthairyakaraM param||223||  
 jlvanaM bRuMhaNaM sAtmyaM snehanaM mAnuShaM payaH|  
 nAvanaM raktapitte ca tarpaNaM cAkShiSUlinAm||224||

Now begins the section on cow's milk and its products. Cow's milk has ten properties viz. sweet, cold, soft, unctuous, dense, glossy, viscid, heavy, slow and clear. [217]

Possessing these qualities which are common with those of the vital essence (ojas), milk promotes vital essence. Milk is said to be foremost among vitalizers and rejuvenators of health. [218]

Buffalo's milk is heavier and is colder in potency and more unctuous than the cow's milk and is beneficial in insomnia and in reducing excess of agni(digestion and metabolism). [219]

Camel's milk is slightly dry, hot, saltish, light and recommended in vata and kapha disorders, constipation, parasitic infection, edema, abdominal afflictions and piles. [220]

The milk of the animals of uncloven hoof (equines, including horses, mares, etc) is strengthening, stabilizing, hot, slightly sour and saltish, dry, is effective in treating vata afflictions of the extremities, and is light. [221]

Goat's milk is an astringent, is sweet, cold in potency, light and is effective in treating *raktapitta* (bleeding disorders), diarrhea, wasting, cough and fever. [222]

Sheep's milk causes hiccups, dyspnea, is hot and increases pitta and kapha. Elephant's milk is strengthening, heavy and an excellent stabilizer of the body. [223]

The human milk is vitalizing, nourishing and wholesome, increases suppleness, is useful as a nasal medication in *raktapitta* (bleeding disorders) and is also soothing to persons having pain in eyes. [224]

#### Qualities of curd

रोचनंदीपनंवृष्यंस्नेहनंबलवर्धनम्।  
पाकेऽम्लमुष्णंवातघ्नंमङ्गल्यंबृहणंदधि॥२२५॥  
पीनसेचातिसारेचशीतकेविषमज्वरे।  
अरुचौमूत्रकृच्छ्रेचकाश्येचदधिशस्यते॥२२६॥  
शरद्ग्रीष्मवसन्तेषुप्रायशोदधिगर्हितम्।  
रक्तपितकफोत्थेषुविकारेष्वहितंचतत्॥२२७॥

rōcanam dīpanam vṛṣyam snēhanam balavardhanam|  
pākē'mlamuṣṇam vātaghnam maṅgalyam bṛmhanam dadhil||225||  
pīnasē cātisārē ca śītakē viṣamajvarē|  
arucau mūtrakrcchrē ca kārṣyē ca dadhi śasyatē||226||  
śaradgrīṣmavasantēṣu prāyaśō dadhi garhitam|  
raktapittakaphōtthēṣu vikārēṣvahitam ca tat||227||  
rocanaM dlpanaM vRuShyaM snehanaM balavardhanam|

pAke&mlamuShNaM vAtaGnaM ma~ggalyaM bRuMhaNaM dadhi||225||

plnase cAtisAre ca Sltake viShamajvare|

arucau mUtrakRucCre ca kArSye ca dadhi Sasyate||226||

SaradgrlShmavasanteShu prAyaSo dadhi garhitam|

raktapittakaPottheShu vikAreShvahitaM ca tat||227||

Curd is an appetizer and an aphrodisiac. It increases unctuousness and strength, is sour on digestion, hot in potency, is effective in treating vata disorders and is auspicious and nourishing. It is recommended in rhinitis, diarrhea, cold, irregular fevers, anorexia, dysuria and emaciation. [225-226]

Generally, curd is prohibited in autumn, summer and spring seasons. It is also unwholesome in *raktapitta* (bleeding disorders) and disorders of kapha. [227]

त्रिदोषमन्दकं, जातंवातचन्द्रिधि, शुक्रलः।

सरः, श्लेष्मानिलघ्नस्तुमण्डःस्रोतोविशोधनः॥२२८॥

tridōṣāṁ [1] mandakāṁ, jātaṁ vātaghnāṁ dadhi, śukralaḥ|

saraḥ, ślēṣmānilaghnaṁtū maṇḍaḥ srōtōviśōdhanāḥ||228||

tridoShaM mandakaM, jAtaM vAtaGnaM dadhi, SukralaH|

saraH, SleShmAnilaGnastu maNDaH srotoviSodhanaH||228||

Immature or partly formed curd aggravates all the three dosha and mature curd is effective in treating vata. The cream of curds is seminiferous and the whey is considered effective in treating kapha and vata and cleaning the channels. [228]

#### Benefits of butter-milk

शोफार्शोग्रहणीदोषमूत्रग्रहोदरारुचौ।

स्नेहव्यापदिपाण्डुत्वेतक्रंदद्याद् ग्रेषुच॥२२९॥

śōphārśōgrahaṇīdōṣamūtragrahōdarārucau|

snēhavyāpadi pāṇḍutvē takraṁ dadyādgareṣu ca||229||

SoPArSograhaNIdoShamUtragrahodarArucau|

snehavyApadi pANDutve takraM dadyAdgareShu ca||229||

Butter milk should be administered in cases of edema, piles, assimilation-disorders, suppression of urine, abdominal diseases, anorexia and complications arising from oleation therapy, anemia, and gara poisoning. [229]

### Benefits of butter

सङ्ग्राहिदीपनंहृदयंनवनीतंनवोदधृतम्।

ग्रहण्यर्शोविकारघ्नमर्दितारुचिनाशनम्॥२३०॥

saṅgrāhi dīpanam hṛdyam navanītam navoddhṛtam|

grahaṇyarśōvikāraghnamarditārucināśanam||230||

sa~ggrAhi dlpanaM hRudyam navanItaM navoddhRutam|

graHaNyaRSoVikAraGnamarditArucinASanam||230||

Fresh-made butter is considered an astringent, appetizer, and effective in treating assimilation-disorders, piles, trauma and anorexia. [230]

### Benefits of ghee

स्मृतिबुद्ध्यग्निशुक्रौजःकफमेदोविवर्धनम्।

वातपित्तविषोन्मादशोषालक्ष्मीज्वरापहम् ॥२३१॥

सर्वस्नेहोत्तमंशीतंमधुरंरसपाकयोः

सहस्रवीर्यविधिभिर्घृतंकर्मसहस्रकृत्॥२३२॥

मदापस्मारमूर्च्छायशोषोन्मादगरज्वरान्

योनिकर्णशिरःशूलंघृतंजीर्णमपोहति॥२३३॥

सर्पिष्यजाविमहिषीक्षीरवत्स्वानिनिर्दिशेत्।

smṛtibuddhyagniśukraujahkaphamēdōvivardhanam|

vātapittaviṣōnmādaśōśālakṣmījvarāpaham [1] ||231||

sarvasnēhōttamam sītam madhuram rasapākayoh|

sahasravīryam vidhibhirghṛtam karmasahasrakṛt||232||

madāpasmāramūrcchāyaśōśōnmādagarajvarān|

yōnikarṇaśiraḥsūlam gṛtam jīrṇamapōhati||233||

sarpīṁṣyajāvīmahiṣīkṣītravat svāni nirdiśēt||234||

smRutibuddhyagniSukraujaHkaPamedovivardhanam|

vAtapittaviShonmAdaSoShAlakShmljvarApaham ||231||

sarvasnehottamaM SItaM madhuraM rasapAkayoh

sahasravIryaM vidhiBirGRutaM karmasahasrakRut||232||

madApasmAramUrcCAyaSoShonmAdagarajvarAn  
 yonikarNaSiraHSUlaM GRutaM jlrNamapohati||233||  
 sarplMShyajAvimahiShIkShlravat svAni nirdiSet|

Ghee helps enhance memory, intelligence, agni (digestion and metabolism), shukra (semen), ojas (vital essence), kapha and fat. It is considered effective in treating vata, pitta, toxic conditions, insanity, consumption, inauspiciousness and fever. It is considered the most unctuous of edible substances, cold in potency, 'sweet' (in taste as well as after digestion) and when prepared according to proper pharmaceutical methods, its potency is increased thousandfold and is efficacious in a thousand ways. Preserved ghee is effective in treating intoxication, epilepsy, fainting, consumption, insanity, toxic conditions, fever and pain in the vagina, ear and head. The ghee made of milks of goat, sheep and buffalo are considered to have qualities of the milks of the respective animals they are made of. [231-233]

#### Qualities of various milk products

पीयूषोमोरटंचैवकिलाटाविविधाश्चये ॥२३४॥  
 दीप्ताग्नीनामनिद्राणांसर्वएवसुखप्रदाः।  
 गुरवस्तर्पणावृष्याबृहणाःपवनापहाः ॥२३५॥  
 विशदागुरवोरुक्षाग्राहिणस्तक्रपिण्डकाः।  
 गोरसानामयंवर्गोनवमःपरिकीर्तिः ॥२३६॥  
 pīyūṣo mōraṭāṁ caiva kilāṭā vividhāśca yē||234||  
 dīptāgnīnāmanidrāṇāṁ sarva ēva sukhapradāḥ|  
 guravastarpaṇā vṛṣyā bṛhmaṇāḥ pavanāpahāḥ||235||  
 viśadā guravō rūkṣā grāhiṇastakrapiṇḍakāḥ|  
 gōrasānāmayāṁ vargō navamah̄ parikīrtitah̄||236||

The early and late colostrums and various kinds of cream-cheese (*kilatha*) are beneficial to people having strong agni or those suffering from insomnia. These are heavy, nourishing, aphrodisiac, and are effective in treating vata. [234-235]

The solid portion of curds is limpid, heavy, dry, and astringent. [236]

इतिगोरसवर्गोनवमः ॥९॥  
 iti gōrasavargō navamah̄ ||9||  
 iti gorasavargo navamaH||9||

Thus, has been described the ninth section on cow's milk and its product.

### *Class of sugarcane and its products*

अथेक्षुवर्गः-

वृष्यःशीतःसरःस्निग्धोबृंहणोमधुरोरसः।  
शैत्यात्प्रसादान्माधुर्यात्पौपडकाद्वंशकोवरः।

athēkṣuvargah-

vṛṣyāḥ śītāḥ sarāḥ snigdhō bṛṁhaṇō madhurō rasāḥ|  
ślēśmalō bhakṣitasyēkṣōryāntrikastu [1] vidahyatē||237||  
śaityāt prasādānmādhuryāt pauṇḍrakādvaramśakō varāḥ||238||  
athekShuvargaH-

vRuShyaH SItaH saraH snigdho bRuMhaNo madhuro rasaH|  
SaityAt prasAdAnmAdhuryAt pauNDrakAdvaMSako varah|

Now described are sugarcane juices and derived products. Sugarcane juice should ideally be consumed right off the cane by chewing. Machine-pressed juice does not have the same quality and can be irritating. Sugarcane juice is an aphrodisiac, cold in potency, laxative, unctuous, nourishing, sweet, and increases kapha. The *vamshaka* variety of sugarcane is considered inferior to the white variety (*paundraka*) in the matter of coolness. [237]

### *Qualities of treacle (gud, jaggery)*

प्रभृतक्रिमिमज्जासृङ्गमेदोमांसकरोगडः॥२३८॥ क्षुद्रोगडश्चतर्भागत्रिभागार्धावशेषितः।  
रसोगुरुर्यथापूर्वधौतःस्वल्पमलोगुडः॥२३९॥ ततोमत्स्याण्डिकाखण्डशर्कराविमलाःपरम्।  
यथायथैषांवैमल्यंभवेच्छैत्यंतथातथा॥२४०॥ वृष्याक्षीणक्षतहितासस्नेहागुडशर्करा।  
कषायमधुराशीतासतिक्तायासशर्करा॥२४१॥ रुक्षावम्यतिसारघ्नीच्छेदनीमधुशर्करा।  
तृष्णासृङ्गिपत्तदाहेषुप्रशस्ताःसर्वशर्कराः॥२४२॥

prabhūtakrimimajjāsṛṅmēdōmāṁsakarō guḍah||238|| kṣudrō  
guḍāścaturbhāgatribhāgārdhāvaśēsitah| rasō gururyathāpūrvam̄ dhautah svalpamalō  
guḍah||239|| tatō matsyaṇḍikākhaṇḍaśarkarā vimalāḥ param| yathā yathaiśāṁ  
vaimalyam̄ bhavēcchaityam̄ tathā tathā||240|| vṛṣyā kṣīṇakṣatahitā sasnēhā  
guḍaśarkarā| kaśāyamadhurā śītā satiktā yāsaśarkarā||241|| rūkṣā vamyatisāraghnī  
cchēdanī madhuśarkarā| tṛṣṇāśṛkpittadāhēsu praśastāḥ sarvaśarkarāḥ||242||  
praBUTakrimimajjAsRu~gmedomAMsakaro guDaH||238|| kShudro  
guDaScaturBAgatriBAgArdhAvaSeShitaH| raso gururyathApUrvam dhautaH  
svalpamalo guDaH||239|| tato matsyaNDikAKaNDaSarkarA vimalAH param| yathA  
yathaiShAM vaimalyaM BavecCaityaM tathA tathA||240|| vRuShyA kShINakShatahitA  
sasnehA guDaSarkarA| kaShAyamadhurA SItA satiktA yAsaSarkarA||241|| rUkShA  
vamyatisAraGnI cCedanI madhuSarkarA| tRuShNAsRukpittadAheShu praSastAH  
sarvaSarkarAH||242||

Treacle (guda, jaggery) greatly enhances marrow, blood, fat and flesh. However, it is prone to causing worms. Treacle made of juice of the sugar-cane boiled down to one fourth, one third or one half its original quantities is called coarse guda or immature guda. The greater the condensation, the heavier the guda. Conversely, purified guda is that which has very little impurity. [238-239]

Further purification turns it into matsyandika/ curd sugar. Sugar-candy/khanda and crystal-sugar/sharkara are considered extremely pure. According to its degree of purity its cooling quality is increased. [240]

The sugar from sugar cane juice (gur) is aphrodisiac, slightly unctuous and beneficial to those who are emaciated and suffering from pectoral lesions. The sugar prepared from yasasharkara (Alhagi pseudalhagi (Bieb.) Desv.) or camel thorn is astringent, sweet, cold in potency and slightly bitter. [241]

The honey-sugar is dry, is effective in treating vomiting and diarrhea and depletive. All sugars are beneficial in thirst, raktapitta and burning sensation. [242]

#### Qualities of honey

माक्षिकं भामरं क्षौद्रं पौत्रिकं मधुजातयः । माक्षिकं प्रवरं तेषां विशेषादभामरं गुरु ॥२४३॥  
माक्षिकं तैलवर्णस्याद्घृतवर्णं तु पौत्रिकम् । क्षौद्रं कपिलवर्णस्याच्छ्रवेतं भामरमुच्यते ॥२४४॥

mākṣikam bhrāmaram kṣaudram pauttikam madhujātayaḥ| mākṣikam pravaram tēśām  
viśeṣādbhrāmaram guru||243|| mākṣikam tailavarṇam syādgṛtavarṇam tu pauttikam|  
kṣaudram kapilavarṇam syācchvētam bhrāmaramucyatē||244||

mAkShikAM BrAmaraM kShaudraM pauttikaM madhujAtayaH| mAkShikaM pravaraM  
teShAM viSeShAdBrAmaraM guru||243|| mAkShikaM tailavarNaM syAdGRutavarNaM  
tu pauttikam| kShaudraM kapilavarNaM syAcCvetaM BrAmaramucyate||244||

Honey is of four kinds: bee-honey, wasp-honey, insect-honey and large-bee-honey. Bee honey is the best of them and wasp-honey is especially heavy to digest. [243]

Bee-honey is of the color of oil and large-bee honey is said to be of the color of ghee,  
Insect-honey is tawny and wasp-honey is stated to be white. [244]

वातलं गुरुशीतं चरक्तपित्कफापहम् । सन्धात् च्छेदनं रुक्षं कषायं मधुरं मधु ॥२४५॥  
हन्यान्मधूष्णमुष्णार्तमथवासविषान्वयात् । गुरुरुक्षकषायत्वाच्छैत्योच्चाल्पहितमधु ॥२४६॥

vātalām guru sītarām ca raktapittakaphāpaham| sandhāṭ cchedanām rūkṣam kaṣāyam  
madhurām madhu ||245|| hanyānmadhūṣnamuṣṇārtamathavā saviṣānvayāt|  
gururūkṣakaṣāyatvācchaityāccālparām hitām madhu||246||

vAtalaM guru SItaM ca raktapittakaPApaham| sandhAtRu cchedanaM rUkShaM  
kaShAyaM madhuraM madhu ||245|| hanyAnmadhUShNamUShNArtamathavA  
saviShAnvayAt| gururUkShakaShAyatvAccCaityAccAlpaM hitaM madhu||246||

Honey aggravates vata, is heavy to digest, cold in potency, is effective in treating raktapitta and kapha disorders and is viscid, dry, astringent and sweet. [245]

Heated or warm honey can be fatal. It can kill if given in conditions arise due to excess heat owing to its poisonous effect during the process of accumulation. Being heavy, dry, astringent and cold in potency, it is also wholesome in small doses. [246]

नातःकष्टतमंकिञ्चिन्मध्वामातदधिमानवम् । उपक्रमविरोधित्वात्सद्योहन्न्याद्यथाविषम् ॥२४७॥  
आमेसोष्णाक्रियाकार्यासामध्वामेविरुद्धयते । मध्वामंदारुणंतस्मात्सद्योहन्न्याद्यथाविषम् ॥२४८॥

nātaḥ kaṣṭatamam kiñcinmadhvāmāttaddhi mānavam| upakramavirōdhītvāt sadyō  
hanyādyathā viṣam||247|| āmē sōṣṇā kriyā kāryā sā madhvāmē virudhyatē|  
madhvāmām dāruṇam tasmāt sadyō hanyādyathā viṣam||248||

nAtaH kaShTatamaM ki~jcinmadhvAmAttaddhi mAnavam| upakramavirodhitvAt sadyo  
hanyAdyathA viSham||247|| Ame soShNA kriyA kAryA sA madhvAme virudhyate|  
madhvAmaM dAruNaM tasmAt sadyo hanyAdyathA viSham||248||

There is no disease more difficult to treat than honey-induced ama disorder. The severity of treatment itself can kill the patient as quickly as poison. [247]

In chyme disorders (ama), treatment with drugs of hot potency is indicated. However, hot things are contra-indicated in the ama-disorder induced by honey. Hence honey-induced ama-disorder is a serious condition causing death as immediately as poison. [248]

नानाद्रव्यात्मकत्वाच्चयोगवाहिपरंमधु । इतीक्षुविकृतिप्रायोवर्गोऽयंदशमोमतः ॥२४९॥

nānādravyātmakatvācca yōgavāhi param madhu| itīkṣuvikṛtiprāyō vargo'yaṁ daśamō  
mataḥ||249||

nAnAdravyAtmakatvAcca yogavAhi paraM madhu| itlkShuvikRutiprAyo vargo&yaM  
daSamo mataH||249||

Since honey is composed of various substances, it is the best of vehicles (or medium) for administering medication. [249]

इतीक्षुवर्गोदशमः ॥१०॥

itīkṣuvargō daśamah ||10||

itlkShuvargo daSamaH||10||

Thus ends this tenth section mainly dealing with sugar-cane products.

#### *Class of cooked food preparations*

अथकृतान्नवर्गः:- क्षुतृष्णाग्लानिदौर्बल्यकुक्षिरोगज्वरापहा । स्वेदाग्निजननीपेयावातवर्चोनुलोमनी ॥२५०॥  
तर्पणोग्राहिणीलघ्वीहृदयाचापिविलेपिका । मण्डस्तुदीपयत्यग्निंवातंचाप्यनुलोमयेत् ॥२५१॥  
मृदूकरोतिस्रोतांसिस्वेदंसञ्जनयत्यपि । लङ्घितानांविरिक्तानांजीर्णस्नेहेचतृष्यताम् ॥२५२॥

दीपनत्वाल्लघुत्वाच्चमण्डःस्यात्प्राणधारणः। लाजपेयाश्रमधनीतुक्षामकण्ठस्यदेहिनः॥२५३॥  
 तृष्णातीसारशमनोधातुसाम्यकरःशिवः। लाजमण्डोग्निजननोदाहमूर्च्छानिवारणः॥२५४॥  
 मन्दाग्निविषमाग्नीनाबालस्थविरयोषिताम्। देयश्चसुक्तमाराणालाजमण्डःसुसंस्कृतः॥२५५॥  
 क्षुत्पिपासापहःपथ्यःशुद्धानांचमलापहः। शृतःपिपलिशुण्ठीभ्यांयुक्तो लाजाम्लदाढिमैः॥२५६॥  
 कषायमधुरा:शीतालघवोलाजसक्तवः।

atha kṛtānnavargah- kṣutṛṣṇāglānidaurbalyakukṣirōgajvarāpahā| svēdāgnijananī pēyā  
 vātavarcōnulōmanī||250|| tarpaṇī grāhiṇī laghvī hṛdyā cāpi vilēpikā| maṇḍastu  
 dīpayatyagnīm vātam cāpyanulōmayēt||251|| mṛdūkarōti srōtāṁsi svēdāṁ  
 sañjanayatyapi| laṅghitānāṁ viriktānāṁ jīrṇē snēhē ca ṭṛṣyatām||252||  
 dīpanatvāllaghutvācca maṇḍah syāt prāṇadhāraṇah| lājapēyā śramaghnī tu  
 kṣāmakaṇṭhasya dēhinah||253|| ṭṛṣṇātīsāraśamāno dhātusāmyakaraḥ śivah|  
 lājamāṇḍōgnijananō dāhamūrcchānivāraṇah ||254|| mandāgniviṣamāgnīnāṁ  
 bālasthavirayōṣitām| dēyaśca sukumārānāṁ lājamāṇḍah susamskṛtah||255||  
 kṣutpipāsāpahāḥ pathyah śuddhānāṁ ca malāpahāḥ| śṛtaḥ pippaliśuṇṭhībhyaṁ yuktō  
 lājāmladāḍimaiḥ||256|| kaśāyamadhurāḥ sītā laghavō lājasaktavah|257| atha  
 kRutAnnavaGaH- kShuttRuShNAglAnidaurbalyakukShirogajvarApahA| svedAgnijananI  
 peyA vAtavarconulomanI||250|| tarpaNI grAhiNI laGvI hRudyA cApi vilepikA| maNDastu  
 dIpayatyagniM vAtaM cApyanulomayet||251|| mRudUkaroti srotAMsi svedaM  
 sa~jjanayatyapi| la~gGitAnAM viriktAnAM jIrnNe snehe ca tRuShyatAm||252||  
 dIpanatvAllaGutvAcca maNDaH syAt prANadhAraNaH| IAjapeyA SramaGnI tu  
 kShAmakaNThasya dehinaH||253|| tRuShNAtsAraSamano dhAtusAmyakaraH SivaH|  
 IAjamaNDo&gnijanano dAhamUrcCAnivAraNaH ||254|| mandAgniviShamAgnInAM  
 bAlasthavirayoShitAm| deyaSca sukumArANAM IAjamaNDaH susaMskRutaH||255||  
 kShutpipAsApahaH pathyah SuddhAnAM ca malApahaH| SRutaH pippaliSuNThIByAM  
 yukto IAjAmladADimaiH||256|| kaShAyamadhurAH SItA laGavo IAjasaktavaH|

Now begins the section on cooked foods. Thin gruel removes hunger, thirst, weariness, weakness, stomach disorder and fever. It causes perspiration, stimulates agni and regulates the course of flatulence and feces. [250]

Thick gruel (vilepi) is nourishing, astringent, and is light. Gruel-water (manda) kindles agni and regulates the downward course of vata. It softens the channels and causes perspiration. It sustains life on account of its ability to stimulate agni and lightness especially in those who have undergone reduction (langhana) therapies, purificatory procedures, and in those who have developed thirst after any unctuous dose has been digested. [251-252]

The thin gruel of roasted paddy removes fatigue particularly in people ailing with weakened voice. [253] The gruel water of roasted cornflour alleviates thirst and diarrhea, maintains normalcy of tissue elements, is generally considered beneficial to health and even auspicious, stimulates agni and is effective in treating burning sensation as well as fainting. The gruel water of fried corn, well-seasoned, must be given to people suffering from weak and irregular agni, to children, the aged, women and to persons of delicate health. [254-255]

If it is mixed with long pepper (*Piper longum* Linn.) and dried ginger (*Zingiber officinale Rosc.*), boiled with corn and sour pomegranates, gruel water of roasted corn flour allays hunger and thirst, is nourishing and removes the residual morbidity in those who have undergone purificatory procedures. The roasted corn-flour is an astringent, is sweet in taste, is cold in potency, and is light. [256]

सुधौतःप्रसुतःस्विन्नःसन्तप्तश्चौदनोलघुः॥२५७॥ भृष्टतण्डुलमिच्छन्तिगरश्लेष्मामयेष्वपि।  
अधौतोऽप्रसुतोऽस्विन्नःशीतश्चाप्योदनोगुरुः॥२५८॥ मांसशाकवसातैलघृतमज्जफलौदनाः।  
बल्याःसन्तर्पणाहृद्यागुरवोबृंहयन्तिच॥२५९॥ तद्वन्माषतिलक्षीरमुद्गसंयोगसाधिताः।

sudhautah prasrutah svinnah santaptaścaudanō laghuḥ||257|| bṛṣṭataṇḍulamicchanti  
garaślēśmāmayēṣvapiḥ adhautō'prasruto'svinnah śītaścāpyōdanō guruḥ||258||  
māṁsaśākavasātailaghṛtamajjaphalaudanāḥ| balyāḥ santarpaṇā hṛdyā guravō  
bṛṁhayanti ca||259|| tadvanmāṣatilakṣīramudgasamyōgasādhitāḥ||260| sudhautaH  
prasrutaH svinnah santaptaScaudano laGuH||257|| BRuShTataNDulamicCanti  
garaSleShmAmayeShvapiḥ adhauto:'prasruto:'svinnah SItaScApyodano guruH||258||  
mAMsaSAkavasAtailaGRutamajjaPalaudanAH| balyAH santarpaNA hRudyA guravo  
bRuMhayanti ca||259|| tadvanmAShatilakShIramudgasaMyogasAdhitAH|

Rice that is well cleansed, squeezed out, steam-softened and warm makes light food. In toxic conditions and kapha disorders, fried rice is indicated. Cooked rice if uncleansed, with the boiled water not pressed out, not properly softened and eaten cold is heavy to digest. [257-258]

Rice prepared with flesh, vegetables, fat oil, ghee, marrow or fruit is strengthening, nourishing, cordial, and heavy. Likewise, rice cooked together with black gram, tila, milk and green gram. [259]

कल्माषागरवोरुक्षावातलाभिन्नवर्चसः॥२६०॥ स्विन्नभक्ष्यास्तुयेकिचित्सौप्यगौधूमयाविकाः।  
भिषकतेषाँयथाद्रव्यमादिशेद्गुरुलाघवम्॥२६१॥

kulmāṣā guravō rūkṣā vātalā bhinnavarcasah||260|| svinnabhakṣyāstu yē kicit  
saupyagaudhūmayāvikāḥ| bhiṣak tēṣāṁ yathādravyamādiśēdgurulāghavam||261||  
kulmA ShA guravo rUkShA vAtalA BinnavarcaH||260|| svinnabakShyAstu ye kicit  
saupyagaudhUmayAvikAH| BiShak teShAM yathAdravyamAdiSedgurulAGavam||261||

Kulmasha (a variety of pea) is heavy to digest, dry, vata provoking and loosens the stools. [260]

As regards steamed dishes made out of pulses, wheat and barley, the physician should determine their qualities of heaviness and lightness in accordance with the substances used. [261]

अकृतंकृतयूषंचतनुंसंस्कारिकंरसम्। सूपमम्लमनम्लंचगुरुंविद्याद्यथोत्तरम्॥२६२॥

akṛtam kṛtayūṣam ca tanum sāṁskārikam rasam| sūpamamlamanamlam ca gurum  
vidyādyathōttaram||262|| akRutaM kRutayUSham ca tanuM sAMskArikaM rasam|  
sUpamamlamanamlam ca guruM vidyAdyathottaram||262||

Unseasoned soup and well-seasoned soup, thin and thick meat juices, sour and non-sour broths – these should be regarded heavier (to digest) than the other in the given order. [262]

सक्तवोवातलारुक्षाबहुवर्चोनुलोमिनः । तर्पयन्ति नरं सदयः पीताः सद्योबलाश्चते ॥२६३॥  
मधुरालघवः शीताः सक्तवः शालिसम्भवा । ग्राहिणो रक्तं पितन्धनास्तृष्णाच्छर्दिं जवरापहा ॥२६४॥

saktavo vAtalA rUkShA bahuvarconulominaH| tarpayanti naraM sadyaH pltAH  
sadyobalAshca te||263|| madhurA laghavaH shItAH saktavaH shAlisambhavAH|  
grAhino raktapittaghnAstRuShNAccardijvarApahAH||264|| saktavō vātalā rūkṣā  
bahuvarcōnulōminah| tarpayanti naram sadyah pītāḥ sadyōbalāśca tē||263|| madhurā  
laghavaḥ śītāḥ saktavaḥ śālisambhavāḥ| grāhiṇō  
raktapittaghnāstṛṣṇāccardijvarāpahāḥ||264||

Roasted flour is dry, aggravates vata, increases fecal matter and regulates peristalsis. When taken, it immediately nourishes and strengthens the person. [263]

The flour of roasted shali rice is sweet, light, cold in potency, astringent, and is effective in treating raktapitta, thirst, vomiting and fever. [264]

हन्यादत्याधीन्यवापूपोयावकोवाट्यएवच । उदावर्तप्रतिश्यायकासमेहगलग्नहान् ॥२६५॥  
धानासञ्जास्तुयेभक्ष्याः प्रायस्तेलेखनात्मकाः । शुष्कत्वात्पणाश्चैवविष्टमिभ्वाच्यदुर्जराः ॥२६६॥  
विरुद्धानाशष्कुल्यो मधुक्रोडाः सपिण्डकाः । पूपाः पूपलिकाद्याश्चगुरवः पैष्ठिकाः परम् ॥२६७॥

hanyādvyaādhīn yavāpūpō yāvakō vātya ēva ca|  
udāvartapratīsyāyakāsamēhagalagrahān||265|| dhānāsañjñāstu yē bhakṣyāḥ prāyastē  
lēkhanātmakāḥ śuṣkatvāttarpanāścaiva viṣṭambhitvācca durjarāḥ||266|| virūḍhadhānā  
śaṣkulyō madhukrōdāḥ sapiṇḍakāḥ pūpāḥ pūpalikādyāśca guravaḥ paistiķāḥ  
param||267|| hanyAdvyAdhIn yavApUpo yAvako vATya eva ca|  
udAvartapratīSyAyakAsamehagalagrahAn||265|| dhAnAsajAstu ye BakShyAH prAyaste  
leKanAtmakAH| SuShkatvAttarpaNAScaiva viShTamBitvAcca durjarAH||266||  
virUDhadhAnA SaShkulyo madhukroDAH sapiNDakAH| pUpAH pUpalikAdyASca  
guravaH paiShTikAH param||267||

Apupa (pancake of barley) is effective in treating coryza, cough, urinary disorders and throat spasm while fried barley also causes udavarta (a disease due to vitiation of vata owing to suppression of urges). [265]

The barley preparation known as dhana is generally considered a revulsant. It is nourishing because of its dryness and is difficult to digest owing to its delaying tendency in the intestines. [266]

Virudha-dhana (germinated barley), shashkuli, madhukrodas with pindakas, pupa, pupalika (kind of seet cake fried in ghee or oil), and other preparations of flour are extremely heavy. [267]

फलमांसवसाशाकपललक्ष्मौद्रसंस्कृताः । भक्ष्यावृष्याश्चबल्याश्चगुरवोबृहणात्मकाः ॥२६८॥  
वेशवारोगरुःस्त्रिगधोबलोपचयवर्धनः । गुरवस्तर्पणावृष्याःक्षीरेक्षुरसपूपकाः ॥२६९॥  
सगुडाःसतीलाश्चैवसक्षीरक्षौद्रशर्कराः । भक्ष्यावृष्याश्चबल्याश्चपरतुगुरवःस्मृताः ॥२७०॥

phalamāṁsavasāśākapalalakṣaudrasaṁskṛtāḥ| bhakṣyā vṛṣyāśca balyāśca guravō  
bṛhmaṇātmakāḥ||268|| vēśavārō guruḥ snigdhō balōpacayavardhanaḥ| guravastarpaṇā  
vṛṣyāḥ kṣīrēkṣurasapūpakāḥ [1] ||269|| sagudāḥ satilāścaiva sakṣīrakṣaudraśarkarāḥ|  
bhakṣyā vṛṣyāśca balyāśca param tu guravaḥ smṛtāḥ||270||  
PalamAMsavasASAkapalalakShaudrasaMskRutAH| BakShyA vRuShyASca balyASca  
guravo bRuMhaNAtmakAH||268|| veSavAro guruH snigdho balopacayavardhanaH|  
guravastarpaNA vRuShyAH kShIrekShurasapUpakAH ||269|| saguDAH satilAScaiva  
sakShIrkShaudraSarkarAH| BakShyA vRuShyASca balyASca paraM tu guravaH  
smRutAH||270||

Cooked dishes prepared with fruits, flesh, fat, vegetables, tila-paste and honey are considered an aphrodisiac and are strengthening, heavy to digest and nourishing. [268]

The veshavara (a kind of seasoning) is heavy, unctuous and increases strength and plumpness. Apupa preparations made of milk and sugarcane juices are heavy, nourishing and aphrodisiac. [269]

Preparation mixed with gud, tila or milk, with honey and sugar are considered aphrodisiac, strengthening and very heavy. [270]

सस्नेहाःस्नेहसिद्धाश्चभक्ष्याविविधलक्षणाः । गुरवस्तर्पणावृष्याहृद्यागौधूमिकामताः ॥२७१॥  
संस्काराल्लघवःसन्तिभक्ष्यागौधूमपैष्टिकाः । धानापर्पटपूपाद्यास्तान्बुद्ध्वानिर्दिशेतथा॥२७२॥

sasnēhāḥ snēhasiddhāśca bhakṣyā vividhalakṣanāḥ| guravastarpaṇā vṛṣyā hṛdyā  
gaudhūmikā matāḥ||271|| saṁskārāllaghavaḥ santi bhakṣyā gaudhūmapaiśṭikāḥ|  
dhānāparpaṭapūpādyāstān buddhvā nirdiśettathā||272|| sasnehAH snehasiddhASca  
BakShyA vividhalakShaNAH| guravastarpaNA vRuShyA hRudyA gaudhUmikA  
matAH||271|| saMskArAllaGavaH santi BakShyA gaudhUmapaiShTikAH|  
dhAnAparpaTapUpAdyAstAn buddhvA nirdiSettathA||272||

The many kinds of preparations of wheat mixed with unctuous substances or cooked with them are heavy, nourishing, aphrodisiac and cordial. [271]

The preparations of wheat flour such as dhana, parpata, apupa (a kind of fine bread/cake of flour) etc, become light when seasoned. Knowing them thus, one should prescribe them. [272]

पृथुकागुरवोभृष्टान् भक्षयेदल्पशस्तुतान् । यावाविष्टङ्गजीर्यन्तिसरसाभिन्नवर्चसः ॥२७३॥

pṛthukā guravō bhr̥tān [1] bhakṣayēdalpaśastu tān| yāvā viṣṭabhya jīryanti sarasā  
bhinnavarcasah||273|| pRuthukA guravo BRuShTAn BakShayedalpaSastu tAn| yAvA  
viShTaBya jlryanti sarasA BinnavarcaH||273||

Flattened rice is heavy. It must be eaten in small quantities after being fried. Fried barley is slow to digest while un-fried barley causes loose stools. [273]

सूप्यान्नविकृताभक्ष्यावातलारुक्षशीतलाः । सकटुस्नेहलवणानल्पशोभक्षयेत्तान् ॥२७४॥

sūpyānnavikṛtā bhakṣyā vātalā rūkṣaśītalāḥ! sakaṭusnēhalavaṇānalpaśō bhakṣayēttu  
tān||274|| sUpyAnnavikRutA BakShyA vAtalA rUkShaSItalAH|  
sakaTusnehalavaNAnalpaSo BakShayettu tAn||274||

Preparations of pulses aggravate vata, and are dry and cold in potency. They must be taken in small quantities with pungent, unctuous and saltish substances. [274]

मृदुपाकाशचयेभक्ष्याःस्थूलाश्चकठिनाशचये । गुरवस्तेव्यतिक्रान्तपाकाःपुष्टिबलप्रदाः ॥२७५॥  
द्रव्यसंयोगसंस्कारंद्रव्यमानंपृथक्तथा । भक्ष्याणामादिशेषबुद्ध्वायथास्वगुरुलाघवम् ॥२७६॥

mṛdupākāśca yē bhakṣyāḥ sthūlāśca kaṭhināśca yē| guravastē vyatikrāntapākāḥ  
puṣṭibalapradāḥ||275|| dravyasamīyogaśamskāram dravyamānam pṛthak tathāḥ  
bhakṣyāñāmādiśedbuddhvā yathāsvām gurulāghavam||276|| mRudupAkASca ye  
BakShyAH sthUIASca kaThinASca yel guravaste vyatikrAntapAkAH  
puShTibalapradAH||275|| dravyasaMyogasaMskAraM dravyamAnaM pRuthak tathA|  
BakShyANAmAdiSedbuddhvA yathAsvaM gurulAGavam||276||

Summary of qualities:

Preparations that need to be cooked over a low fire for a long time and are thick and hard are heavy, get slowly digested and impart plumpness and strength. [275]

The heaviness and lightness of preparations must be determined according to the combination of the above mentioned substances, the nature of preparation and the measure of each substance. [276]

(नानाद्रव्यैः समायक्तःपक्वामक्लिन्नभर्जितैः । विर्दकोगुरुहृद्योवृष्योबलवतांहितः ॥२७७॥)  
रसालाबृंहणीवृष्यास्नेनग्धाबल्यारुचिप्रदा । स्नेहनंतर्पणंहृदयवातघ्नसगुडंधिः ॥२७८॥

(nānādravyaiḥ [1] samāyuktaḥ pakvāmaklinnabharjitaḥ| vimardako gururhṛdyo vṛṣyō  
balavatām hitaḥ)||277|| rasālā bṛṁhaṇī vṛṣyā snigdhā balyā rucipradā| snēhanām  
tarpaṇām hṛdyām vātaghnām saguḍām dadhi||278|| (nAnAdravyaiH samAyuktaH  
pakvAmaklinnaBarjitaH| vimardako gururhRudyo vRuShyo balavatAM hitaH||277||)  
rasAIA bRuMhaNI vRuShyA snigdhA balyA rucipradA| snehanaM tarpaNaM hRudyA M  
vAtaGnaM saguDaM dadhi||278||

Vimardaka (Cassia tora) prepared with ripe, unripe, softened and roasted substances is heavy, cordial, aphrodisiac and well-suited to physically strong individuals. [277]

The preparation called rasala (curds or puddings mixed sugar and spices) is nourishing, aphrodisiac, unctuous, strengthening and an appetizer. Curds taken with guda enhances unctuousness, is nourishing, cordial and is effective in treating vata. [278]

द्राक्षाखर्जूरकोलानांगुरुविष्टमिभपानकम् । परूषकाणांक्षौद्रस्ययच्चेक्षुविकृतिंप्रति ॥२७९॥  
तेषाकट्वम्लसंयोगान् पानकानांपृथक्पृथक् । द्रव्यमानंचविशायगुणकमीणिचादिशेत् ॥२८०॥  
कट्वम्लस्वादुलवणालघवोरागषाडवाः । मुखप्रियाश्चहृदयाश्चदीपनाभक्तरोचनाः ॥२८१॥

आमामलकलेहाश्चबृंहणाबलवर्धनाः। रोचनास्तर्पणश्चोक्ताःस्नेहमाधुर्यगौरवात्॥२८२॥  
बुद्ध्वासंयोगसंस्कारद्रव्यमानंचतच्छ्रितम्। गुणकर्माणिलेहानांतेषांतेषांतथावदेत्॥२८३॥

drākṣākharjūrakolānāṁ guru viṣṭambhi pānakam| parūṣakāṇāṁ kṣaudrasya  
yaccēkṣuvikṛtiṁ prati||279|| tēśāṁ kaṭvamlasāmyōgān [1] pānakānāṁ pṛthak pṛthak|  
dravyāṁ mānāṁ ca vijñāya guṇakarmāṇī cādiśēt||280|| kaṭvamlasvādulavaṇā laghavō  
rāgaśāḍavāḥ| mukhapriyāśca hṛdyāśca dīpanā bhaktarōcanāḥ||281||  
āmrāmalakalēhāśca bṛmhāṇā balavardhanāḥ| rōcanāstarpaṇāścōktāḥ  
snēhamādhuryagauravāt||282|| buddhvā saṁyōgasarṇskāraṁ dravyamānāṁ ca  
tacchritam| guṇakarmāṇī lehānāṁ tēśāṁ tēśāṁ tathā vadēt||283||

drAkShAKarjUrakolAnAM guru viShTamBi pAnakam| parUShakANAM kShaudrasya  
yaccekShuvikRutiM prati||279|| teShAM kaTvamlasaMyogAn pAnakAnAM pRuthak  
pRuthak| dravyaM mAñAM ca vij~jAya guNakarmANi cAdiSet||280||  
kaTvamlasvAdulavaNA laGavo rAgaShADavAH| muKapriyASca hRudyASca dlpanA  
BaktarocanAH||281|| AmrAmalakalehASca bRuMhaNA balavardhanAH|  
rocanAstarpaNAScoktAH snehamAdhuryagauravAt||282|| buddhvA  
saMyogasaMskAraM dravyamAnaM ca tacCritam| guNakarmANi lehAnAM teShAM  
teShAM tathA vadet||283||

A potion made of grapes, dates and Indian jujube/ kola is heavy and delayed in the intestines. So is the potion made of sweet parushaka (a tree), honey and the products of sugar-cane. [279] The qualities and actions of these beverages should be determined by knowing the individual nature of the substances, the quantity used and the combination of pungent and acidic tastes. [280]

The preparations called raga and shadava (confectionary) are pungent, sour, sweet, salt and light. They are pleasant to taste, cordial, digestive-stimulant and appetizers. [281]

The linctuses of mango and emblic myrobalan, on account of being unctuous, sweet and heavy, are said to be strengthening, appetizing and nourishing. [282]

Depending upon the admixture, preparation and measure of ingredients used in these electuaries, the characteristics and action of each of them should be determined. [283]

रक्तपित्तकफोत्क्लेदिशुक्तंवातानुलोमनम्। कन्दमूलफलाद्यंचतदवद्विद्यात्तदासुतम्॥२८४॥  
शिण्डाकीचासुतंचान्यत्कालाम्लरौचनंलघु। विद्याद्वर्गकृतान्नानामेकादशतमंभिषक्॥२८५॥

raktapittakaphōtklēdi śuktam vātānulōmanam| kandamūlaphalādyam ca  
tadvadvidyāttadāsutam||284|| śiṇḍākī cāsutaṁ cānyat kālāmlaṁ rōcanam laghu|  
vidyādvargam kṛtānnānāmēkādaśatamarāṁ bhiṣak||285|| raktapittakaPotkledi SuktaM  
vAtAnulomanam| kandamUlaPalAdyaM ca tadvadvidyAttadAsutam||284|| SiNDAkI  
cAsutaM cAnyat kAIAmIaM rocanam laGu| vidyAdvargaM  
kRutAnnAnAmekAdaSatamaM BiShak||285||

The shukta beverage (sour liquor or gruel) aggravates raktapitta and kapha, and regulates vata. One should know the properties of the bulbs, roots and fruits etc. fermented in this beverage to have the same qualities. [284]

Shindaki (a sour, fermented preparation) and other fermented articles that turn sour owing to long periods of preservation are appetizing and light. The physician should know this section on cooked foods. [285]

इतिकृतान्नवर्गएकादशः ॥११॥

iti kṛtānnavarga ēkādaśah||11||

iti kRutAnnavaRga ekAdaSaH||11||

Thus ends the eleventh section on cooked foods.

### *Class on food articles*

कषायानुरसं स्वादुस्कृममष्णंव्यवायिच। पितलंबदध्विष्मूत्रंनचश्लेष्माभिवर्धनम्॥२८६॥

वातध्नेषूतम्बल्यत्वच्यंमेधाग्निवर्धनम्। तैलंसंयोगसंस्कारात्सर्वरोगापहंमतम्॥२८७॥

तैलप्रयोगादजरानिर्विकाराजितश्रमाः। आसन्नतिबलाःसङ्ख्येदैत्याधिपतयःपुरा॥२८८॥

ऐरण्डतैलंमधुरंगुरुश्लेष्माभिवर्धनम्। वातासुग्गल्महृद्गजीर्णज्वरहरंपरम्॥२८९॥

कटूष्णंसार्षपतैलरक्तपितप्रदूषणम्। कफशुक्रानिलहरंकण्डुकोठविनाशनम्॥२९०॥

प्रियालतैलंमधुरंगुरुश्लेष्माभिवर्धनम्। हितमिच्छन्तिनात्यौष्ण्यात्संयोगेवातपितयोः॥२९१॥

आतस्यमधुराम्लतविपाकेकटुकंतथा। उष्णवीर्यहितंवातेरक्तपितप्रकोपणम्॥२९२॥

कसुम्भतैलमष्णंचौविपाकेकटुकंगुरु। विदाहिचविशेषेणसर्वदोषप्रकोपणम्॥२९३॥

फैलानांयानिचान्यानितैलान्याहारसंविधौ युज्यन्तेगुणकर्मभ्यांतानिब्रूयाद्यथाफलम्॥२९४॥

kaṣāyānurasam [1] svādu sūkṣmamuṣṇam vyavāyi ca| pittalarū baddhaviṇmūtram na  
ca śleṣmābhivardhanam||286|| vātaghnēśūttamarū balyarū tvacyarū

mēdhāgnivardhanam| tailarū saṁyōgasarṇskārāt sarvarōgāpaharū matam||287||

tailaprayōgādajarā nirvikārā jitaśramāḥ| āsannatibalāḥ saṅkhyē daityādhipatayah  
purā||288|| airaṇḍatailarū madhurarū guru śleṣmābhivardhanam|

vātāśruggulmahṛdrōgajīrṇajvarahararū param||289|| kaṭuṣṇarū sārṣaparū tailarū

raktapittapradūṣanam| kaphaśukrānilaharaṇam kāṇḍūkōṭhavināśanam [2] ||290||

priyālatailarū madhurarū guru śleṣmābhivardhanam| hitamicchanti nātyauṣṇyātsaṁyōge

vātapittayōḥ||291|| ātasyarū madhurāmlarū tu vipākē kaṭukarū tathāḥ uṣṇavīryarū hitarū

vātē raktapittaprakōpaṇam||292|| kusumbhatalamuṣṇarū ca vipākē kaṭukarū guru|

vidāhi ca viśeṣēṇa sarvadōṣaprakōpaṇam||293|| phalānām yāni cānyāni

tailānyāhārasamvidhau [3] | yujyantē guṇakarmabhyām tāni brūyādyathāphalam||294||

kaShAyAnuraSaM svAdu sUkShmamuShNaM vyavAyi ca| pittalaM baddhaviNmUtraM  
na ca SleShmABividhanam||286|| vAtaGneShUttamaM balyaM tvacyaM

medhAgnivardhanam| tailaM saMyogasaMsKArAt sarvarogApahaM matam||287||

tailaprayogAdajarA nirvikArA jitaSramAH| AsannatibalAH sa~gKye daityAdhipatayah

purA||288|| airaNDatilaM madhuraM guru SleShmABividhanam|

vAtAsRuggulmahRudrogajIrnajvaraharaM param||289|| kaTUShNaM sArShapaM tailaM

raktapittapradUShaNam| kaPaSukrAnilaharaM kaNDUKoThavinASanam ||290||

priyAlatailam madhuraM guru SleShmABividhanam| hitamicCanti

nAtyuShNyAtsaMyoge vAtapittayoH||291|| AtasyaM madhurAmlaM tu vipAke kaTukaM

tathA| uShNavIryaM hitaM vAte raktapittaprakopaNam||292|| kusumBatalamuShNaM

ca vipAke kaTukaM guru| vidAhi ca viSeSheNa sarvadoShaprakopaNam||293||

PalAnAM yAni cAnyAni tailAnyAhArasaMvidhau yujyante guNakarmaByAM tAni  
brUyAdyathAPalam||294||

Til (Sesamum indicum Linn.) oil is an astringent in after-taste, mildly sweet, hot, and diffusive that aggravates pitta and causes constipation and oliguria. It does not increase kapha. It is the best among pacifiers of vata, enhances strength, is good for the skin and increases intelligence and agni. Til oil is considered a very effective vehicle for administering various drugs [286-287] The medicinal properties of the Til oil have also been mentioned in the vedic scriptures - using the oil, the legendary daitya (demon) kings overcame aging, diseases, and fatigue, while gaining great strength in their battles with the Devas (Gods).[288]

Castor oil (Ricinus communis Linn.) is sweet, heavy, and kapha-aggravating. It is highly effective in treating vata, rakta gulma, heart-diseases and chronic fever. [289]

The white rape-seed (Brassica campestris Linn. Var. Sarson Prain) is pungent, hot, vitiates blood and pitta, and depletes kapha and semen. It is also very effective in treating vata-disorders, pruritus and urticaria. [290]

The oil of Buchanan's mango (priyala, Buchanans mango /Buchanania lanza Spreng) is sweet, heavy and kapha-aggravating. It is beneficial in vata-pitta combination diseases as it is not very hot in potency. [291]

The linseed (Linum usitatissimum Linn.) oil is sweet, sour and pungent (after digestion), and hot in potency. It is beneficial in vata but aggravates rakta & pitta. [292]

The safflower (Carthamus tinctorius Linn.) oil is hot, pungent after digestion, and heavy. It is excessively irritant and provokes all dosha. [293]

The qualities of other oils used in food but derived from fruits are not mentioned here. These are known by the qualities of the fruits themselves. [294]

मधुरोबृंहणोवृष्योबल्योमज्जातथावसा। यथासत्त्वंतुशैत्योष्णोवसामज्जोर्विनिर्दिशेत्॥२९४॥

madhuro bṛṁhaṇo vṛṣyō balyō majjā tathā vasā| yathāsattvam tu śaityoṣṇē  
vasāmajjñōrvinirdiśēt||295||

madhuro bRuMhaNo vRuShyo balyo majjA tathA vasA| yathAsattvaM tu SaityoShNe  
vasAmajj~jorvinirdiSet||295||

Animal marrow and fat are sweet, nourishing, aphrodisiac, strengthening, and hot or cool depending upon the nature or type of the animal. [295]

सस्नेहंदीपनंवृष्यमृणांवातकफापहम्। विपाकेमधुरंहृद्यंरोचनंविश्वभेषजम्॥२९६॥  
श्लेष्मलामधुराचाद्रागुर्वीस्त्विनग्धाचपिप्पली। साशुष्काकफवातघ्नीकटूष्णावृष्यसम्मता ॥२९७॥  
नात्यर्थमृणामरिचमवृष्यलघुरोचनम्। छेदित्वाच्छोषणत्वाच्चदीपनकफवातजित् ॥२९८॥  
वातश्लेष्मविबन्धनकटूष्णदीपनलघु। हिङ्गशूलप्रशमनंविद्यात्पाचनरोचनम्॥२९९॥  
रोचनंदीपनंवृष्यंचक्षुष्यमेविदाहिच। त्रिदोषधनसमधुरं सैन्धवंलवणोत्तमम्॥३००॥  
सौक्ष्म्यादौष्ण्याल्लघुत्वाच्चसौगन्ध्याच्चरुचिप्रदम्। सौवर्चलंविबन्धनंहृद्यमुद्गारशोधिच॥३०१॥

तैक्षण्यादौष्ण्यादव्यवायित्वाददीपनंशूलनाशनम्। ऊर्ध्वचार्थचवातानामानुलोभ्यकरंबिडम्॥३०२॥  
 सतिक्तकटुसक्षारंतीक्षणमुत्क्लेदिचौद्भिदम्। नकाललवणेगन्धःसौवर्घलगुणाशते॥३०३॥  
 सामुद्रकसमधुरं, सतिक्तकटुपांशुजम्। रोचनलवणंसर्वपाकिसंस्यनिलापहम्॥३०४॥

sasnēham dīpanam vṛṣyamuṣṇam vātakaphāpaham| vipākē madhuram hṛdyam  
 rōcanam viśvabhēṣajam||296|| ślēṣmalā madhurā cādrā gurvī snigdhā ca pippalī sā  
 śuṣkā kaphavātaghnī kaṭuṣṇā vṛṣyasammata [1] ||297|| nātyarthamuṣṇam  
 maricamavṛṣyam laghu rōcanam| chēditvācchōṣanatvācca dīpanam kaphavātajit [2]  
 ||298|| vātaślēṣmavibandhaghnam kaṭuṣṇam dīpanam laghu| hiṅgu śūlapraśamanam  
 vidyāt pācanarōcanam||299|| rōcanam dīpanam vṛṣyam cakṣuṣyamavidāhi ca|  
 tridōṣaghnam samadhuram [3] saindhavam lavaṇottamam||300||  
 saukṣmyādauṣṇyāllaghutvācca saugandhyācca rucipradam| sauvarcalam  
 vibandhaghnam hṛdyamudgāraśōdhi ca||301|| taikṣṇyādauṣṇyādvayavāyitvāddīpanam  
 śūlanāśanam| ūrdhvam cādhaśca vātānāmānulōmyakaram biḍam||302|| satiktakaṭu  
 sakṣāram tīkṣṇamutklēdi caudbhidam| na kālalavaṇē gandhaḥ sauvarcalaguṇāśca  
 tē||303|| sāmudrakam samadhuram, satiktaṁ kaṭu pāṁśujam| rōcanam lavaṇam  
 sarvam pāki sraṁsyanilāpaham||304||

nAtyarthaShNaM maricamavRuShyaM laGu rocanam| CeditvAcCoShaNatvAcca  
 dlpanaM kaPavAtajit ||298|| vAtaSleShmavibandhaGnaM kaTUShNaM dlpanaM laGu|  
 hi~ggu SUlapraSamanaM vidyAt pAcanarocanam||299|| rocanam dlpanaM vRuShyaM  
 cakShuShyamavidAhi ca| tridoShaGnaM samadhuraM ( ‘saindhavaguNe samadhuram  
 IShanmadhuram’ iti SivadAsasenaH; ) saindhavaM lavaNottamam||300||  
 saukShmyAdauShNyAllaGutvAcca saugandhyAcca rucipradam| sauvarcalaM  
 vibandhaGnaM hRudyamudgAraSodhi ca||301||  
 taikShNyAdauShNyAdvyavAyitvAddlpanaM SUlanASanam| UrdhvaM cAdhaSca  
 vAtAnAmAnulomyakaraM biDam||302|| satiktakaTu sakShAraM tīkShNamutkledi  
 caudBidam| na kAlalavaNe gandhaH sauvarcalaguNASca te||303|| sAmudrakam  
 samadhuraM, satiktaM kaTu pAMsujam| rocanam lavaNaM sarvam pAki  
 sraMsyanilApaham||304||

Ginger (*Zingiber officinale Rosc.*) is slightly unctuous, stimulates digestion, aphrodisiac, hot, effective in treating vata and kapha, and sweet after digestion. [296]

Green long pepper (*Piper longum Linn.*) increases kapha, is sweet, heavy and unctuous. Dried pepper alleviates kapha and vata, is pungent and hot, and is considered an aphrodisiac. [297]

Black pepper (*Piper nigrum Linn.*) is not very hot, is anaphrodisiac, light, appetizing and is depletive and desiccating. It is effective in treating kapha and vata. [298]

Asafoetida (*Ferula narthex Boiss.*) is regarded to be effective in treating vata, kapha and obstipation. It is pungent, hot, appetizing, light, and alleviates colicky pain. [299]

Rock salt is considered the best of salts - it is an appetizer and an aphrodisiac. It also improves eye-sight and is a non-irritant. It is effective in treating dosha imbalances and is slightly sweet. [300]

The sanchal salt is subtle, hot, light, fragrant, relishing, removes obstruction, cordial [palatable] and clears belching. [301]

Bida salt being sharp, hot, and diffusive, stimulates digestion, is effective in treating colicky pain and regulates the upward and downward courses of vata. [302]

The efflorescent (audbhida) salt is slightly bitter, pungent, slightly alkaline, sharp and liquefacent. kalabag rock-salt has no smell. Its qualities are similar to those of sanchal salt. [303]

The sea-salt is slightly sweet while the earth-salt is slightly bitter and pungent. All salts are appetizing, digestive, laxative and are effective in treating vata. [304]

हृत्पाण्डुग्रहणीरोगप्लीहानाहगलग्रहान्। कासंकफजमर्शसियावशकोव्यपोहति॥३०५॥  
तीक्ष्णोष्णोलघुरुक्षश्चक्लेदीपक्ता विदारणः। दाहनोदीपनश्छेत्तासर्वे:क्षारोऽग्निसन्निभः॥३०६॥

हृत्पाण्डुग्रहणीरोगप्लीहानाहगलग्रहान्| कासम् kaphajamarśāmsi yāvaśūkō vyapōhati||305|| tīkṣṇōṣṇō laghurūkṣaśca klēdī paktā [1] vidāraṇah| dāhanō dīpanaśchēttā sarvah kṣārō'gnisannibhaḥ [2] ||306||

hRutpANDugrahaNIrogaplhAnAhagalagrahAn| kAsaM kaPajamarSAMsi yAvaSUko vyapohati||305|| tlkShNoShNo laGurUkShaSca kledl paktA vidAraNaH| dAhano dpanaSCettA sarvaH kShAro&gnisanniBaH ||306||

Yavakshara (barley alkali) is effective in treating diseases of the heart, anaemia, assimilation disorders, spleenic disorders, constipation, throat-spasm, cough of the kapha type and piles. [305]

All alkalis are like fiery, sharp, hot, light, dry, liquefacent, digestive, corrosive, caustic, stimulates digestion and destructive of tissues. [306]

कारवीकुञ्चिकाऽजाजीयवानीधान्यतुम्बुरु। रोचनंदीपनंवातकफदौर्गन्ध्यनाशनम्॥३०७॥

kāravī kuñcikā'jājī yavānī dhānyatumburu| rōcanam dīpanam  
vātakaphadaurgandhyanāśanam||307||

kAravI ku~jcikA&jAjI yavAnI dhAnyatumburu| rocanam dpanam  
vAtakaPadaurgandhyanASanam||307||

Celery seeds (*karavi*, Carum bulbocastanum W.Koch.), black cumin (*kunchika*, Nigella sativa Linn.), cumin (*ajaji*, Cuminum cyminum Linn.), bishops weed (*yavani*, Trachyspermum ammi Linn.), coriander (*dhanyaka*, Coriandrum sativum) and Indian tooth-ache tree (*tumburu*, Zanthoxylum armatum DC) are appetizing, stimulate digestion, alleviate vata and kapha, and remove foul odour.[307]

आहारयोगिनांभक्तिनिश्चयोनतुविद्यते। समाप्तो द्वादशश्चायंवर्गआहारयोगिनाम्॥३०८॥

āhārayōginām bhaktiniścayō na tu vidyatē| samāptō [1] dvādaśaścāyam varga  
āhārayōginām||308||

AhArayoginAM BaktiniScayo na tu vidyate| samApto dvAdaSaScAyaM varga  
AhArayoginAm||308||

Dietary adjuvants do not, however, fit into a rigid classification. [308]

इत्याहारयोगिवर्गोद्वादशः॥१२॥

ityāhārayōgivargō dvādaśah ||12||

ityAhArayogivargo dvAdaSaH||12||

Thus ends the twelfth section on the articles used in cooked foods.

### General considerations in qualities

शूकधान्यं शमीधान्यं समातीतं प्रशस्यते। पुराणं प्रायशो रुक्षं प्रायेणा भिनवं गुरु ॥३०९॥

यद्यदागच्छति क्षिप्रं ततल्लघुतं स्मृतम्। निस्तुषं युक्तिभृष्टं च सूप्यं लघु विपच्यते॥३१०॥

śūkadadhānyam śamīdhānyam samātītam praśasyatē| purāṇam prāyaśō rūkṣam  
prāyēṇābhīnavam guru [1] ||309||

yadyadāgacchati [2] kṣipram tattallaghutaram smṛtam| nistuṣam yuktiḥṛṣṭam ca  
sūpyam laghu vipacyatē||310||

SUkadhAnyam SamIdhAnyam samAtItaM praSasyate| purANaM prAyaSo rUkShaM  
prAyeNABinavaM guru ||309||

yadyadAgacCati kShipraM tattallaGutaraM smRutam| nistuShaM yuktiBRuShTaM ca  
sUpyaM laGu vipacyate||310||

Cereals and pulses that are one-year-old (not older) are recommended. Old grain is generally dry and the new generally heavy to digest. [309]

That grain which grows quicker is considered lighter than the others. The decorticated and slightly roasted pulse is digested easily. [310]

मृतं कृशं चातिमेद्यं वृद्धं बालं विषेहतम्। अगोचरभृतं व्यालसूदितं मांसमुत्सृजेत्॥३११॥

अतोऽन्यथा हितं मांसं बृहणं बलवर्धनम्।

mṛtam kṛśam cātimēdyam vṛddham bālam viṣairhatam| agōcarabhṛtam vyālasūditam  
māṁsamutsr̄jet||311||

ato'nyathā hitam māṁsam bṛhmaṇam balavardhanam||312||

mRutaM kRuSaM cAtimedyaM vRuddhaM bAlaM viShairhatam| agocaraBRutaM  
vyAlasUditaM mAMsamutsRujet||311||

ato&nyathA hitaM mAMsaM bRuMhaNaM balavardhanam|

The flesh of the animal which is dead, emaciated, very fat, old, too young, killed by poisoning, reared in unnatural habitat or killed by a tiger or snake should be avoided. Except for the above scenarios, flesh of animals described in this and prior chapters is wholesome, nourishing and promotes strength. [311]

प्रीणनःसर्वभूतानांहृदयोमांसरसःपरम्॥३१२॥

शुष्यतांव्याधिमुक्तानांकृशानांक्षीणरेतसाम्। बलवर्णार्थिनांचैवरसंविद्याद्यथामृतम्॥३१३॥

सर्वरोगप्रशमनंयथास्वंविहितंसम्। विद्यात्स्वर्यबलकरंवयोबुद्धीन्द्रियायुषाम्॥३१४॥

व्यायामनित्याःस्त्रीनित्यामद्यनित्याश्चयेनराः। नित्यमांसरसाहारानातुराःस्युर्नदुर्बलाः॥३१५॥

prīṇanah sarvabhūtānām hṛdyo māṁsarasaḥ param||312||

śuṣyatāṁ vyādhimuktānām kṛśānām kṣīnarētasām| balavarṇārthīnām caiva rasam  
vidyādyathāmṛtam||313||

sarvarōgapraśamanāṁ yathāsvaṁ vihitāṁ rasam| vidyāt svaryāṁ balakaram  
vayōbuddhīndriyāyuṣām||314||

vyāyāmanityāḥ strīnityā madyanityāśca yē narāḥ| nityām māṁsarasaḥārā nāturāḥ  
syurna durbalāḥ||315||

priNanaH sarvaBUtAnAM hRudyo mAmsarasaH param||312||

SuShyatAM vyAdhimuktAnAM kRuSAnAM kShINaretasAm| balavarNArthinAM caiva  
rasaM vidyAdyathAmRutam||313||

sarvarogapraSamanaM yathAsvaM vihitaM rasam| vidyAt svaryaM balakaraM  
vayobuddhIndriyAyuShAm||314||

vyAyAmanityAH strInityA madyanityASca ye narAH| nityaM mAMsarasaHArA nAturAH  
syurna durbalAH||315||

Meat juice has been considered to be the most nourishing of food articles for those who are wasted, convalescing, emaciated, deficient in semen and desirous of enhanced strength and complexion – in fact, for such patients, meat juice has been regarded as nectar itself. [312-313]

Meat juice administered as indicated is effective in treating most diseases. It promotes or enhances voice, youth, intelligence, sense-faculties and longevity. [314]

If those given to constant exercise and indulgence in women and wine take meat juice daily, they will never fall ill or become weak. [315]

### Signs of bad quality (avoidable) vegetables, fruits and greens

क्रिमिवातातपहतंशुष्कंजीर्णमनार्तवम्। शाकनिःस्नेहसिद्धंचवर्जय्यच्चापरिसुतम्॥३१६॥

पुराणमामंसङ्किलष्टंक्रिमिव्यालहिमातपैः। अदेशकालजंकिलन्नंयत्स्यात्फलमसाधुतत्॥३१७॥

हरितानां यथाशाकंनिर्देशःसाधनाद्वते। मद्याम्बुगोरसादीनांस्वेस्वेवर्गविनिश्चयः॥३१८॥

krimivātātapahatam śuṣkam jīrṇamanārtavam| śākam niḥsnēhasiddham ca varjyam  
yaccāparisrutam||316||

purāṇamāmarṁ saṅkliṣṭam krimivyālahimātapaiḥ| adēśakālajam klinnam  
yatsyātphalamasādhu tat||317||

haritānām [1] yathāśākam nirdēśah sādhanādṛtē| madyāmbugōrasādīnām svē svē  
vargē viniścayah||318||

krimivAtAtapahataM SuShkaM jIrnamanArtavam| SAkaM niHsnehasiddhaM ca varjyaM  
yaccAparisrutam||316||

purANamAmaM sa~gkliShTaM krimivyAlahimAtapaiH| adeSakAlajaM klinnaM  
yatsyAtPalamasAdhu tat||317||

haritAnAM yathASAkaM nirdeSaH sAdhanAdRute| madyAmbugorasAdInAM sve sve  
varge viniScayaH||318||

Vegetable spoilt by maggots, wind, sun, or those that are dried, decayed, off-season, cooked without unctuous substances, or eaten without draining off boiled water should be avoided. [316]

Fruits that are old, unripe or damaged by insects, snakes, frost or sun, and those that are of improper season and place or are putrified should be regarded as not good for use. [317]

The rules regarding greens are the same as vegetables, except in the mode of preparation. As regards wine, water and milk etc. these have been described in their respective actions. [318]

### Anupana (beverages after food)

*General guidelines for beverages after food*

यदाहारगुणैः पानंविपरीतंतदिष्यते। अन्नानुपानंधातूनांद्वष्टंयन्नविरोधिच॥३१९॥

आसवानांसमुद्दिष्टामशीतिंचतुरुत्तराम्। जलंपेयमपेयंचपरीक्ष्यानुपिबेद्धितम्॥३२०॥

स्निग्धोष्णं मारुतेशस्तंपित्तेमधुरशीतलम्। कफेऽनुपानंरुक्षोष्णंक्षयेमांसरसःपरम्॥३२१॥

उपवासाद्वभाष्यस्त्रीमारुतातपकर्मभिः। क्लान्तानामनुपानार्थपयःपथ्यंयथाऽमृतम्॥३२२॥

सुराकृशानांपुष्ट्यर्थमनुपानंविधीयते। कार्यार्थस्थूलदेहानामनुशस्तंमधूदकम्॥३२३॥

अल्पाग्नीनामनिद्राणांतन्द्राशोकभयक्लमैः। मद्यमांसोचितानांचमद्यमेवानुशस्यते॥३२४॥

yadāhāraguṇaiḥ [1] pānam viparītam tadiṣyatē annānupānam dhātūnām dṛṣṭām yanna  
virōdhi ca||319||

āsavānāṁ samuddistāmaśītīṁ caturuttarāṁ| jalāṁ pēyamapēyaṁ ca  
parīkṣyānupibēddhitam||320||

snigdhōṣṇāṁ [2] mārutē śastāṁ pittē madhuraśītalam| kaphē'nupānāṁ rūkṣōṣṇāṁ  
kṣayē māṁsarasaḥ param||321||

upavāsādhvabhāṣyastrīmārutātapakarmabhiḥ| klāntānāmanupānārtham payaḥ  
pathyāṁ yathā'mṛtam||322||

surā kṛśānāṁ puṣtyarthamanupānāṁ vidhīyatē| kārṣyārtham sthūladēhānāmanu  
śastāṁ madhūdakam||323||

alpāgnīnāmanidrānāṁ tandrāśōkabhayaklamaiḥ| madyamāṁsōcitānāṁ ca  
madyamēvānuśasyatē||324||

yadAhAraguNaiH pAnaM viparItaM tadiShyate| annAnupAnaM dhAtUnAM dRuShTaM  
yanna virodi ca||319||

AsavAnAM samuddiShTAmaSItiM caturuttarAm| jalaM peyamapeyaM ca  
parlkShyAnupibeddhitam||320||

snigdhoShNaM mArute SastaM pitte madhuraSItalām| kaPe&nupAnaM rUkShoShNaM  
kShaye mAMsarasaH param||321||

upavAsAdhvaBAShyastrImArutAtapakarmaBiH| kIAntAnAmanupAnArthaM payaḥ  
pathyāM yathA&mRutam||322||

surA kRuSAnAM puShTyarthamanupAnaM vidhlyate| kArSyArthaM  
sthUladehAnAmanu SastaM madhUdakam||323||

alpAgnInAmanidrANAM tandrASokaBayaklamaiH| madyamAMsocitAnAM ca  
madyamevAnuSasyate||324||

That drink which is opposite in quality to that of the food taken is the proper corrigent (agent that neutralizes the undesirable-effects of a particular medication or diet). Whatever drink is not deleterious to dosha and dhatus is to be considered the right post-prandial drink. [319]

One should take as his post-prandial drink that which is wholesome and fit to consume based on thorough examination of kinds of water and (eighty-four kinds of) wines described previously. [320]

Unctuous and hot drinks in conditions of vata, sweet and cooling ones in those of pitta, dry and hot ones in kapha, and meat juices in wasting are considered to be the best. [321]

For those fatigued by fasting, travel, lecturing, company of women, or exposure to wind, sun and exertion, milk as a post-prandial drink is considered as wholesome as nectar. [322]

*Sura* wine is recommended as a post-prandial drink for nourishing the emaciated. Combination of honey and water is recommended as a post-prandial drink for reducing the corpulent. [323]

For those suffering from weak agni and insomnia as a result of torpor, grief, fear and fatigue and those accustomed to wine and meat, wine is prescribed as a post-prandial drink. [324]

#### *Benefits of anupana (vehicle)*

अथानुपानकर्मगुणान्प्रवक्ष्यामः- अनुपानंतर्पयति, प्रीणयति, ऊर्जयति, बृंहयति, पर्याप्तिमभिनिर्वर्तयति, भुक्तमवसादयति, अन्नसङ्घातंभिनौति, मार्दवमापादयति, क्लेदयति, जरयति, सुखपरिणामितामाशुव्यवायितांचाहारस्योपजनयतीति॥३२५॥

अवतिचात्र- अनुपानंहितंयुक्तंतर्पयत्याशुमानवम्। सुखंपचतिचाहारमायुषेचबलायच॥३२६॥

athānupānakarmaguṇān [1] pravakṣyāmaḥ- anupānam tarpayati, prīṇayati, ūrjayati, bṛṁhayati, paryāptimabhinirvartayati, bhuktamavasādayati, annasaṅghātambhinatti, mārdavamāpādayati, klēdayati, jarayati, sukhapariṇāmitāmāśuvyavāyitāṁ cāhārasyōpajanayatīti॥325॥

bhavati cātra- anupānam hitam yuktam tarpayatyāśu mānavam| sukham pacati cāhāramāyuṣē ca balāya ca॥326॥

athAnupAnakarmaguNAn pravakShyAmaH- anupAnaM tarpayati, prINayati, Urjayati, bRuMhayati, paryAptimaBinirvartayati, BuktamavasAdayati, annasa~gGAtaM Binatti, mArdavamApAdayati, kledayati, jarayati, suKapariNAmitAmASuvyavAyitAM cAhArasyopajanayatIti॥325॥

Bavati cAtra- anupAnaM hitaM yuktaM tarpayatyASu mAnavam| suKaM pacati cAhAramAyuShe ca balAya ca॥326॥

Now described are the qualities and actions of post-prandial drinks. Post-prandial drinks give nourishment, pleasure, energy, sense of satisfaction, help any food consumed to settle down, helps break down food consumed, impart softness, liquefy, digest and bring about quick assimilation and diffusion in the body. [325]

Post prandial drink, properly administered, can satisfy a person immediately, digest the food effectively and give life and strength. [326]

#### *Contraindications of drinking water after meals*

नोर्ध्वाङ्गमारुताविष्टानहिककाश्वासकासिनः। नगीतभाष्याद्ययनप्रसक्तानोरसिक्षता:॥३२७॥

पिबेयुरुदकंभुक्त्वातदधिकण्ठोरसिस्थितम्। स्नेहमाहारजंहत्वा भूयोदोषायकल्पते॥३२८॥

nōrdhvāṅgamārutāviṣṭā na hikkāśvāsakāsinah| na gītabhāṣyādhyayanaprasaktā nōrasi kṣatāh||327||

pibēyurudakaṁ bhuktvā taddhi kanṭhōrasi sthitam| snēhamāhārajam̄ hatvā [1] bhūyō dōṣāya kalpatē||328||

nordhvA~ggamArutAviShTA na hikkASvAsakAsinaH| na gltaBAShyAdhyayanaprasaktA norasi kShatAH||327||

pibeyurudakaM BuktvA taddhi kaNThorasi sthitam| snehamAhArajaM hatvA BUyo doShAya kalpate||328||

Neither those in whom *vata* is provoked in the upper parts of the body nor those that suffer from hiccups, dyspnea or cough, nor those that are engaged in singing, lecturing or studying, nor those that are suffering from the pectoral lesions should drink water after eating, for it takes away from the throat and chest the unctuous quality of the meal eaten and leads to great morbidity. [327-328]

अन्नपानैकदेशोऽयमुक्तःप्रायोपयोगिकः । द्रव्याणिनहिनिर्देष्टुंशक्यंकात्स्नर्यननामभिः ॥३२९॥

यथानानौषधंकिञ्चिद्देशजानांवचोयथा । द्रव्यंतत्तथावाच्यमनुकृतमिहयद्भवेत् ॥३३०॥

annapānaikadēśō'yamuktah prāyōpayōgikah| dravyāṇi na hi nirdēṣṭum̄ śakyam̄ kārtsnyēna nāmabhiḥ||329||

yathā nānauṣadhaṁ kiñciddēśajānāṁ vacō yathā| dravyam̄ tattattathā vācyamanuktamiha yadbhavēt||330||

annapAnaikadeSo&ymuktaH prAyopayogikaH| dravyANi na hi nirdeShTuM SakyAM kArtsnyena nAmaBiH||329||

yathA nAnauShadhaM ki~jcideSajAnAM vaco yathA| dravyaM tattattathA vAcyamanuktamiha yadBavet||330||

The foods and drinks that are generally in use have been described in this chapter for it is not possible to indicate all substances by their names and properties. [329]

Since there is no substance that may not be used as a medicine, the substances not spoken of here (*anukta dravya*) should be assessed with reference to their qualities observed by people native to the region where they can be found naturally. [330]

### Qualities of creatures according to their habitat and food

चरःशरीरावयवाःस्वभावोधातवःक्रिया । लिङ्गंप्रमाणंसंस्कारोमात्राचास्मिन्परीक्ष्यते ॥३३१॥

caraḥ śarīrāvayavāḥ svabhāvō dhātavaḥ kriyā| liṅgam̄ pramāṇam̄ saṃskārō mātrā cāsmin parīkṣyatē||331||

caraH SarIrAvayavAH svaBAvo dhAtavaH kriyA| li~ggaM pramANaM saMskAro mAtrA cAsmin parIkShyate||331||

An animal's food and habitat, body-parts, constitution, body-elements, activity, sex, size, mode of preparation and measure are herein explained. [331]

चरोऽनूपजलाकाशधन्वाद्योभक्ष्यसंविधिः । जलजानूपजाशैवजलानूपचराश्चये॥३३२॥

गुरुभक्ष्याश्चयेसत्त्वाः सर्वतेगुरवः स्मृताः । लघुभक्ष्यास्तुलघवोधन्वजाधन्वचारिणः॥३३३॥

carō'nūpajalākāśadhanvādyō bhakṣyasaṁvidhiḥ| jalajānūpajāścaiva jalānūpacarāśca  
yē||332||

gurubhakṣyāśca yē sattvāḥ sarvē tē guravaḥ smṛtāḥ| laghubhakṣyāstu laghavō  
dhanvajā dhanvacāriṇāḥ||333||

caro&nUpajalAkASadhanvAdyo BakShyasaMvidhiH| jalajAnUpajAScaiva  
jalAnUpacarASca ye||332||

guruBakShyASca ye sattvAH sarve te guravaH smRutAH| laGuBakShyAstu laGavo  
dhanvajA dhanvacAriNaH||333||

An animal's habitat could be wetlands, water, sky, and arid lands or deserts, while its food is generally called feed. Animals native to water and wetlands or those that eat heavy feed are regarded as heavy (i.e., their meat is heavy). Light feeders are light (their meat is light), such as those that dwell in arid lands or move around arid lands. [332-333]

शरीरावयवाः सक्षिथशिरः स्कन्धादयस्तथा । सक्षिथमांसाद्गुरुः स्कन्धस्ततः क्रोडस्ततः शिरः ॥३३४॥

वृषणौ चर्ममेढंचश्रोणीवृक्षकौयकृदगुदम् । मांसाद्गुरुतरं विद्याद्यथास्वं मध्यमस्थिच ॥३३५॥

śarīrāvayavāḥ sakthiśirahskandhādayastathā| sakthimāṁsādguruḥ [1] skandhastataḥ  
krōḍastataḥ śirah||334||

vṛṣaṇau carma mēḍhram ca śrōṇī vṛkkau yakṛdgudam| māṁsādgurutaram  
vidyādyathāsvam madhyamasti ca||335||

SarlrAvayavAH sakthiSiraHskandhAdayastathA| sakthimAMsAdguruH skandhastataH  
kroDastataH SiraH||334||

vRuShaNau carma meDhraM ca SroNI vRukkau yakRudgudam| mAMsAdgurutaraM  
vidyAdyathAsvaM madhyamasti ca||335||

The key limbs of animals, from the standpoint of their meat, are the thigh-bone, head, shoulder and others. Flesh of the shoulder region is heavier than that of the thigh-bone. Flesh from the chest region is considered heavier than that of the shoulder region, and meat of the head is heavier than that of the chest. Among organs, the testes, skin, phallus, hips, kidneys, liver, rectum, trunk and bone-marrow are heavier than the flesh of any part of the animal's body. [334-335]

स्वभावाल्लघवोमुद्गास्तथालावकपिञ्जलाः । स्वभावाद्गुरवोमाषावराहमहिषास्तथा ॥३३६॥

धातूनां शोणितादीनां गुरुं विद्याद्यथोत्तरम् । अलसेभ्यो विशिष्यन्ते प्राणिनो येबहुक्रियाः ॥३३७॥

svabhāvāllaghavō mudgāstathā lāvakapiñjalāḥ| svabhāvādguravō māśā  
varāhamahiṣāstathā||336||

dhātūnāṁ śōṇitādīnāṁ gurum̄ vidyādyathottaram| alasēbhyo viśiṣyantē prāṇinō yē<sup>1</sup>  
bahukriyāḥ||337||

svaBAvAllaGavo mudgAstathA |Avakapi~jjalAH| svaBAvAdguravo mAsha  
varAhamahiShAstathA||336||

dhAtUnAM SoNitAdInAM guruM vidyAdyathottaram| alaseByo viSiShyante prANino ye  
bahukriyAH||337||

By nature, green gram is light to digest. So, too, are meats of the quail and the grey-partridge. On the other hand, black gram is heavy to digest and so are the flesh of hog and buffalo. [336]

The blood and other dhatus are regarded as increasingly heavy in their due order. The more active and lithe-footed the animal, the lighter its meat is [337]

गौरवंलिङ्गसामान्येपुंसांस्त्रीणांतुलाधवम्। महाप्रमाणागुरवःस्वजातौलघवोऽन्यथा॥३३८॥

gauravaṁ liṅgasāmānyē pūṁsāṁ strīṇāṁ tu lāghavam| mahāpramāṇā guravaḥ  
svajātau laghavō’nyathā||338||

gauravaM li~ggasAmAnye puMsAM strINAM tu IAGavam| mahAframANA guravaH  
svajAtau laGavo&nyathA||338||

In general, heaviness is the characteristic of males while lightness is the characteristic of females. Those that are massive in size in each class are heavy and those that are otherwise are light. [338]

गुरुणांलाधवंविद्यात्संस्कारात्सविपर्ययम्। व्रीहेर्लजायथाचस्युःसक्तूनांसिद्धपिण्डिकाः॥३३९॥

gurūṇāṁ lāghavam̄ vidyāt saṁskārāt saviparyayam| vrīhērlājā yathā ca syuḥ saktūnāṁ  
siddhapīṇḍikāḥ||339||

gurUNAM IAGavaM vidyAt saMskArAt saviparyayam| vrlherlAjA yathA ca syuH  
saktUnAM siddhapiNDikAH||339||

Heavy articles, it should be known, become lighter on preparation (or cooking) and the light ones become heavier just as rice becomes light when roasted and roasted corn flour becomes heavy when cooked and prepared into balls. [339]

अल्पादानेगुरुणांचलधूनांचातिसेवने। मात्राकारणमुद्दिष्टंद्रव्याणांगुरुलाधवे॥३४०॥

गुरुणामल्पमादेयंलधूनांतृप्तिरिष्यते। मात्रांद्रव्याणयपेक्षन्ते मात्राचाग्निमपेक्षते॥३४१॥

alpādānē gurūṇāṁ ca laghūnāṁ cātisēvanē| mātrā kāraṇamuddiṣṭāṁ dravyāṇāṁ  
gurulāghavē||340||

gurūṇāmalpamādēyāṁ laghūnāṁ ṛptirisyatē| mātrāṁ dravyānyapēkṣantē [1] mātrā cāgnimapēkṣatē||341||

alpAdAne gurUNAM ca laGUuNAM cAtisevane| mAtrA kAraNamuddiShTaM dravyANAM gurulAGave||340||

gurUNAmalpamAdeyaM laGUuNAM tRuptiriShyate| mAtrAM dravyANyapekShante mAtrA cAgnimapekShate||341||

Heavy articles should be consumed in small measures and light ones in large quantities. [340]

Food articles should thus be consumed in proper measure and the proper measure should be in accordance with the strength of the individual's agni. [341]

बलमारोग्यमायुश्चप्राणाश्चाग्नौप्रतिष्ठिताः । अन्जपानेन्धनैश्चाग्निर्ज्वलतिव्येतिचान्यथा ॥३४२॥

balamārōgyamāyuśca prāṇāścāgnau pratiṣṭhitāḥ| annapānēndhanaiścāgnirjvalati vyēti cānyathā [1] ||342||

balamArogyamAyuSca prANAScAgnau pratiShThitAH| annapAnendhanaiScAgnirjvalati vyeti cAnyathA ||342||

Strength, health, longevity and vital breath are dependent on the state of agni that burns when fed by the fuel of food and drink or dwindles when deprived of them. [342]

गुरुलाघवचिन्तेयं प्रायेणाल्पबलान्प्रति । मन्दक्रियाननारोग्यान्सुकुमारान्सुखोचितान् ॥३४३॥

gurulāghavacintēyāṁ prāyēṇālpabalān prati| mandakriyānanārōgyān sukumārānsukhōcitān||343||

gurulAGavacinteyaM prAyeNALpabalAn prati| mandakriyAnanArogyAn sukumArAnsukhOcitAn||343||

The consideration of heaviness and lightness of food articles is particularly important for those who are generally weak, indolent, unhealthy, fragile or in a delicate condition of health, and those given to luxury. [343]

दीप्ताग्नयः खराहाराः कर्मनित्यामहोदराः । येनराः प्रतितांश्चिन्त्यं नावश्यं गुरुलाघवम् ॥३४४॥

dīptāgnayah kharāhārāḥ karmanityā mahōdarāḥ| yē narāḥ prati tāṁścintyāṁ nāvaśyāṁ gurulāghavam||344||

dlptAgnayaH KarAhArAH karmanityA mahodarAH| ye narAH prati tAMScintyaM nAvaSyaM gurulAGavam||344||

For those whose agni is strong, are accustomed to tough-to-digest food articles, are accustomed to hard labor and have a large capacity for consumption and digestion of food, the consideration of heavy and light food is not necessary. [344]

हिताभिर्जुह्यान्नित्यमन्तरग्निं समाहितः । अन्जपानसमिदभिर्नामात्राकालौ विचारयन् ॥३४५॥

आहिताग्निःसदापथ्यान्यन्तरग्नौजुहोतियः।। दिवसेदिवसेब्रह्मजपत्यथददातिच॥३४६॥

नरंनिःश्रेयसेयुक्तंसात्म्यजंपानभोजने। भजन्तेनामयाःकेचिद्भाविनोऽप्यन्तरावते॥३४७॥

hitābhirjuhuyānnityamantaragnim samāhitah| annapānasamidbhīrnā mātrākālau  
vicārayan||345||

āhitāgnih sadā pathyānyantaragnau juhōti yah| divasē divasē brahma japatyatha dadāti  
ca||346||

naram niḥśrēyasē yuktām sātmyajñām pānabhōjanē| bhajantē nāmayāḥ  
kēcidbhāvinō'pyantarādṛtē||347||

hitABirjuhuyAnnityamantaragniM samAhitaH| annapAnasamidBirnA mAtrAkAlau  
vicArayan||345||

AhitAgniH sadA pathyAnyantaragnau juhoti yaH| divase divase brahma japatyatha  
dadAti ca||346||

naraM niHSreyase yuktaM sAtmyaj~jaM pAnaBojane| Bajante nAmayAH  
kecidBAvino&pyantarAdRute||347||

A person with discipline and self-control should always feed his agni with the fuel of wholesome food and drink and stay mindful of the consideration of measure and time. [345]

The man whose agni is well tended, who feeds it duly with wholesome diet, who does daily meditation, charity and the pursuit of spiritual salvation, and who takes food and drinks that are wholesome to him, will not fall to approaching diseases except for special reasons. [346-347]

षड्त्रिंशतंसहस्राणिरात्रीणांहितभोजनः। जीवत्यनातुरोजन्तुर्जितात्मासम्मतःसताम्॥३४८॥

ṣadtriṁśatām sahasrāṇi rātrīnām hitabhōjanah| jīvatyanātūro janturjitatmā sammataḥ  
satām||348||

ShaDtriMSataM sahasrANi rAtrINAM hitaBojanaH| jIvatyanAturo janturjitAtmA  
sammataH satAm||348||

The disciplined man who practices wholesome diet lives for a period of 36000 nights i.e. hundred years, is blessed by good people and is free from disease. [348]

प्राणःप्राणभृतामन्नमन्नंलोकोऽभिधावति। वर्णःप्रसादःसौस्वर्यजीवितंप्रतिभासुखम्॥३४९॥

तुष्टिःपुष्टिर्बलंमेधासर्वमन्नेप्रतिष्ठितम्। लौकिकंकर्मयद्वृत्तौस्वर्गतौयच्चवैटिकम्॥३५०॥

prāṇāḥ prāṇabhr̥tāmannamannām lōkō’bhidhāvati| varṇāḥ prasādaḥ sausvaryām  
jīvitām pratibhā sukham||349||

tustih pustirbalaṁ mēdhā sarvamannē pratiṣṭhitam| laukikarṁ karma yadvṛttau svargatau  
yacca vaidikam||350||

karmāpavargē yaccōktarṁ taccāpyannē pratiṣṭhitam|351|

prANAH prANaBRutAmannamannaM loko&BidhAvati| varNaH prasAdaH sausvaryaM  
jlvitAM pratiBA suKam||349||

tuShTiH puShTirbalaM medhA sarvamanne pratiShThitam| laukikaM karma yadvRuttau  
svargatau yacca vaidikam||350|| karmApavarge yaccoktaM taccApyanne pratiShThitam|

As Lord Atreya had mentioned, the source of life for all living beings is food and all living  
beings are food and all the world seeks food. Complexion, clarity, good voice, long life,  
understanding, happiness, satisfaction, growth, strength and intelligence are all  
established in food. [349]

Whatever is beneficial for worldly happiness, whatever pertains to the vedic sacrifices  
leading to heaven and whatever actions lead to spiritual salvation are said to be  
established through food. [350]

## Summary

तत्रश्लोकः- अन्नपानगुणाःसाग्रावर्गाद्वादशनिश्चिताः ||३५१||

सगुणान्यनुपानानिगुरुलाघवसङ्ग्रहः अन्नपानविधावुक्तंतपरीक्ष्यं विशेषतः ||३५२||

इत्यग्निवेशकृतेतन्त्रेचरकप्रतिसंस्कृतेश्लोकस्थानेऽन्नपानविधिर्नामसप्तविंशोऽद्यायः ||२७||

tatra ślōkah- annapānaguṇāḥ sāgryā vargā dvādaśa niścītāḥ||351||

saguṇānyanupānāni gurulāghavasaṅgrahāḥ| annapānavidhāvuktarṁ tat parīkṣyaṁ [1]  
viśēṣataḥ||352||

tatra SlokaH- annapAnaguNAH sAgryA vargA dvAdaSa niScitAH||351||

saguNAnyanupAnAni gurulAGavasa~ggrahaH annapAnavidhAvuktam tat parIkShyaM  
viSeShataH||352||

In summary, the characteristics of food and drinks, twelve classifications of articles of  
diet (along with the foremost of them), post-prandial drinks with their characteristics and  
the statement in brief regarding heaviness and lightness of the articles of diet- all these  
have been described in this chapter on diet and dietetics. [351-352]

Thus, in the Section on General Principles in the treatise compiled by Agnivesha and  
revised by Charak, the twenty-seventh chapter entitled 'The Regimen of food and  
beverages" stands completed.

## Tattva Vimarsha(Fundamental Principles)

1. Extrinsic characteristics, intrinsic qualities, modes of preparation, texture, and taste of a food article are important attributes for it to be suitable for human consumption
2. All food items have natural qualities – beneficial and harmful - that need to be weighed in before recommended for consumption.
3. There are twelve categories of food described in detail in this chapter that need to be studied before prescribing to a patient.
4. Green vegetables that have been contaminated, dried, and are old and unseasonal should not be used.
5. Preparations that require cooking over a low fire for a long time and are thick and hard are considered heavy, slow-to-digest, fatty and strength-enhancing.
6. The heaviness and lightness of preparations must be determined according to the combination of the substances, the nature of preparation and the measure of each substance.
7. Aged cereals and pulses (about a year old) are recommended for consumption. The old grain is generally dry and light and the new generally heavy.
8. Grains that get cooked quicker are considered lighter to digest than the others. The decorticated and slightly roasted pulse is digested easily.
9. The drink which is opposite in quality to that of the food taken is the proper corrigent (a substance added to a medicine to modify its action or counteract a disagreeable effect). Whatever drink is not deleterious to dosha and dhatu is to be considered the right post-prandial drink.
10. One should take as his post-prandial drink that which is wholesome and fit to consume based on its thorough examination.
11. Unctuous and hot drinks in conditions of vata, sweet and cooling ones in those of pitta, dry and hot ones in kapha, and meat juices in wasting are considered to be the best.
12. The digestion depends upon inherent property of the food article as well as its interaction with the agni (body's digestive capacity).
13. Qualities and effects of food are altered after processing, its vehicle and interaction with body.

## Vidhi Vimarsha (Applied Inferences)

### Role of diet in health and disease

For over 4000 years, the Charak Samhita and its predecessor, the Agnivesha Tantra have provided a wealth of knowledge on managing life, not just health and disease management. Sages and practitioners passed on this distilled knowledge by word-to-mouth for centuries. Over the course of this period, the environment around us has changed significantly – affecting us and the living beings around us. Habitats have changed rendering some creatures extinct or endangered, while others have adapted

themselves or evolved. Further, social traditions have dictated changes to our dietary habits. However, the fundamental principles governing food, in general, remain the same, e.g., the role of factors responsible for digestion (agni) , fundamental constitution (Prakriti), taste (rasa), properties (guna), potency (veerya), effects after metabolism (vipaka) and specific effect (prabhava) of various foods. These fundamental principles can be applied today for healthy living. Newer articles of food like paddy(dhanya), vegetables(shaka), greens(harita), meat(mamsa), fruits(phala) and cooked food or drinks(kritanna) can be characterized and used by an experienced Ayurvedic physician. It is a herculean job to describe all the foods available all over the world and describe their characteristics. However an humble attempt has been made to include newer food articles as per Ayurvedic perspective, based on the fundamental principles are described in this chapter.

## Fourteen greens for healthy life

An old saying states “if you took fourteen greens (greens means not only the leaf, also flower, fruits, *nala*, tuber, yeasts and mushrooms) then you may survive from the strain of *Kartika*” (the month of October and November). During this period, there is increased incidence of seasonal diseases. Though this chapter maintains chronological order according to the dietetic code, it has a special aspect for the alleviation of three dosha, to achieve excellent dhatu (body tissues), and clear the micro and macro channels of the body.

To stay healthy and prevent diseases during a change of season, following “Fourteen Greens” are advised.

1. Suran or Elephant yam(*Amorphophallus campanulatus* Blume) is effective for piles(arsha).
2. Kebuka(*Costus speciosus* Koenig) prevents worm infestation.
3. Yavashakam(*Chenopodium pururascens*) is a liver tonic.
4. Kasamarda(*Cassia occidentalis* Linn.) is effective in cough.
5. Sarshapashaka(*Brassica campestris* Linn. Var.*rapa* (L) Hartm) is sharply acting (tikshna) in quality, and is worst among the greens but effective in a particular season.
6. Neem(*Azadirachta indica* A.Juss) is effective in pitta dominant skin diseases.
7. Jayanti (*Sesbania sesban* (Linn.) Merrill) is effective in common seasonal cold and effective in dysuria. It has some anti-poisonous effect.
8. Shalakalyani (Dwarf copper leaf or *Alternanthera sessilis* (Linn) R.Br. ex DC) dispels the accumulated pitta dosha.
9. Guduchi (*Tinospora cordifolia* (Willd) Miers ex Hook.f.& Thoms) pacifies morbid vitiation of all three dosha.
10. Patola patra (*Trichosanthes dioica* Roxb) purifies the accumulated pitta dosha.
11. Shleshmaka(*Cordia dichotoma* Frost. F.) is an appetizer in a particular season.
12. Helenca (*Enhydra fluctuans* Lour) suppresses the pitta dosha.

13. Bhandir(Clerodendrum infortunatum auct. non Linn.C.B. Clarke) is effective in worm infestation.
14. Sunishannaka (Marsilea minuta Linn.) gives nutrition to the nervous system and prevents insomnia.

## Six varieties of vegetables

The vegetables or greens may be classified into six varieties.

1. Leafy vegetables (patra shaka)
2. Flower vegetables(pushpa shaka)
3. Fruit vegetables(phala shaka)
4. Tube/pot herbs vegetables(nala shaka)
5. Rhizome vegetables(kanda shaka)
6. Produced from moist heat(samsvedaja)

And those are successively heavier for digestion in their order. Among them, leafy vegetables (patra shaka) is lightest one. But it should not be used in rainy season, because of the factors responsible for its potency (tejo quality) are diluted by the seasonal effect. Autumn season (pitta vitiation time) is the best to take all types of greens.

## Dietary guidelines

The dietary guidelines (ahara vidhi) are equally important for preservation of health. The quantity, digestive capability, time, seasonal changes, place, preparation, storage, surrounding people, peaceful and mindful eating, lifestyle after taking food have significant effect on digestion, metabolism and nutrition.

## Common food

There are variety of food items based upon the geographical region, societies, traditions and culture. The humans have learnt to satisfy their need of nutrition. More researches are being conducted on food, food processing technologies and engineering. More information about this is available on [food](#) and [cuisine](#) page. However, one shall always follow dietary guidelines while taking food.

## Harmful effects of fast food

With the changing lifestyle, the food items and eating pattern is drastically changed. The popularity of junk food, fast food, processed food, items made from white flour, sugar, maple syrup, honey, agave nectar, and all the junk is high on rise. Fast foods include chips, soda, cookies, candy, breakfast cereals, bars, French fries, burgers, pizza, white flour baked goods, and all other high-calorie, low-nutrient foods that people often eat multiple times per day. These food items contribute to obesity, diabetes, heart attacks, strokes, dementia and cancer. This has resulted in decreased longevity. The fast food, processed food, commercial baked goods, and sweets may also be linked to destruction

of brain cell and a lowering of intelligence. Candy and sweetened baked goods may even stimulate the brain in an addictive fashion, which can lead to more serious illnesses.<sup>284</sup>

The nutritional fundamentals accepted by the World Health Organization and most nutritional authorities today include vegetables, beans, nuts, seeds, and fruit as healthy foods; and salt, saturated fat, and excess sugar as disease causing. Excessive amounts of animal products may lead to premature aging, increased risk of chronic disease and higher all-cause mortality.<sup>285</sup> Therefore it can be stated that the food items described in this chapter are beneficial for preservation of health and prevention of diseases.

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<sup>284</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

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## Vividhashitapitiya Adhyaya

### Sutra Sthana Chapter 28. Sequential effects of food and beverages

#### Abstract

There are biological effects of food and beverages on the physiological systems of body. In a sequence of earlier chapter, this chapter describes principles of digestion and metabolism of consumed diet. The formation of tissue elements and metabolic products during this process are explained in detail. The food nourishes body tissues through various systemic channels named 'srotasa'. Specific disease conditions due to vitiation of these body systems and their principles of management are highlighted in this chapter. Apart from food, factors like habitat, season, combination, potency and excess consumption affecting the status of immunity and disease in the body have also been discussed here. The chapter explains why some people are healthy even after consuming unwholesome food articles while others suffer from diseases even after following wholesome food habits. This chapter also talks of diseases caused due to vitiation of various tissue elements and factors responsible for the movement of dosha from koshtha (gut) to shakha(periphery). These factors are important for preservation of health and disease management. Being the last chapter of tetrad on food and beverages, the chapter summarizes the importance of diet, its examination for wholesome benefits and adverse effects on improper consumption.

**Keywords:** Food, digestion, eatable, drinks, disorders of various systems, treatment, movement of dosha, koshtha, shakha.

#### Introduction

The preceding chapter dealt with properties of various dietary articles and preparations, while this one explains digestion and metabolism processes in brief. Even though *Vividhashitapitiyam* means different kinds of eatables and drinks, the chapter gives a detailed explanation of assimilation of food and its transformation into body tissues and diseases caused due to an abnormality of dhatus along with their line of treatment. Some references to this are also available later in the Charak Samhita Chikitsa Sthana 15th chapter (Grahani Chikitsa).

Wholesome food is vital for the nourishment of human body, the creation of healthy tissues, maintenance of health, and for the prevention of disease. Not following a wholesome food regimen causes vitiation of dosha. These dosha then reside within dhatu (tissue elements), upadhatu(tissues formed from the essence of dhatu during transformation process), or mala (metabolic wastes). In certain situations, the vitiated dosha get aggravated to cause diseases. The entire process is explained with clinical features of association of vitiated dosha with the respective pathogen. The causative factors for movement of dosha from the periphery to the gut and vice versa are important to understand the disease and prescribe the appropriate purification process.

Digestion and assimilation are the most important physiological process in the body. Any abnormality in this process results in the improper formation of the dhatu thus resulting in either deficiency or excessive formation of dhatu resulting in disorders. The causes for the movement of vitiated dosha from alimentary tract (*koshtha*) to the raktadi dhatu and skin (*shakha*) results in the occurrence of diseases. Moving the dosha back to alimentary tract (*koshtha*) and after that removing them eliminates diseases. The line of treatment of various diseases due to an abnormality in the dhatu is mentioned in this chapter. Thus, the chapter presents important aspects of food, digestion, metabolism, immunity, diseases of affected tissues, and guidelines for their treatment.

## Sanskrit text, Transliteration and English Translation

अथातो विविधशितपीतीयमध्यायं व्याख्यास्यामः॥१॥

इति ह स्माह भगवानात्रेयः॥२॥

athātō vividhāśitapītīyamadhyāyāṁ vyākhyāsyāmah॥1॥

iti ha smāha bhagavānātrēyah॥२॥

athAto vividhAshitapltyamadhyAyaM vyAkhyAsyAmaH॥1॥

iti ha smAha bhagavAnAtreyaH॥२॥

Now we shall expound the chapter “Vividhashitapitiya” (Sequential effects of food and beverages). Thus said Lord Atreya. [1]

### Digestion process and its effects

विविधमशितं पीतं लीढं खादितं जन्तोर्हितमन्तरग्निसन्धुक्षितबलेन यथास्वेनोष्मणा  
सम्यग्विपच्यमानंकालवदनवस्थितसर्वधातपाकमनपहतसर्वधातूमारुतस्रोतः केवलं  
शरीरमुपचयबलवर्णसुखायुषा योजयति शरीरधातूनूर्जयतिच। धातवो हि धात्वाहाराः प्रकृतिमनुवर्तन्ते॥३॥

vividhamasitaṁ pītaṁ līḍhaṁ khāditarāṁ jantōrhitamantaragnisandhuksitabalēna  
yathāsvēnōṣmaṇāsamyagvipacyamānaṁ  
kālavadanavasthitasarvadhātupākamanupahatasarvadhātūṣmamārutasrōtahkēvalam  
śarīramupacayabalavarṇasukhāyuṣā yojayati śarīradhātūnūrjayati ca] dhātavō hi  
dhātvāhārāḥ prakṛtimanuvartantē॥३॥

vividhamashitaM pltaM IIDhaM khAditaM jantorhitamantaragnisandhuksitabalena  
yathAsvenoShmaNAsamyaagvipacyamAnaM  
kAlavadanavasthitasarvadhAtupākamanupahatasarvaDhātushmamArutasrotaHkevalaM  
sharIramupacayabalavarNasukhAyuShA yojayati sharIradhAtUnUrjayati ca] dhAtavo hi  
dhAtvAhArAH prakRutimanuvartante॥३॥

Different types of wholesome foods ingested in the form of eatables, drinkables, lickables and masticables stimulate the *antaragni* (digestive process) and get properly digested by respective *bhutagni* (specific digestion as per basic constituent or element). Further in due course of time food gets transformed into different dhatu in presence of

*dhatvagni* (tissue specific digestion and metabolism) and *vata* (*vyana vayu*) by the process of *dhatvagnipaka* or metabolism, nourishes the tissues through the channels of circulation without any interruption, and produces plumpness, strength, complexion, health and longevity. The tissues are sustained by getting fed by various nourishing factors (*poshaka dhatus*). [3]

### Metabolism, excretion, and homeostasis

तत्राहारप्रसादाख्यो रसः किटटं च मलाख्यमभिनिर्वर्तते।

किटटत् स्वेदमूत्रपुरीषवातपितश्लेष्माणः कर्णाक्षिनासिकास्यलोमकूपप्रजननमलाः  
केशश्मश्रुलोमनखादयश्चावयवाःपुष्यन्ति।

पुष्यन्ति त्वाहाररसाद्रसरुधिरमांसमेदोस्थिमज्जशुक्रोजांसि पञ्चेन्द्रियद्रव्याणि  
धौतुप्रसादसञ्जकानिशरीरसन्धिबन्धपिच्छादयश्चावयवाः।

ते सर्व एव धातवो मलाख्याः प्रसादाख्याश्च रसमलाभ्यां पुष्यन्तः स्वं मानमनुवर्तन्ते यथावयःशरीरम्।

एवं रसमलौ स्वप्रमाणावस्थितावाश्रयस्य समधातोर्धातुसाम्यमनुवर्तयतः।

निमित्तस्तु क्षीणवृद्धानां प्रसादाख्यानां धातूनां वृद्धिक्षयाभ्यामाहारमूलाभ्यां रसः  
साम्यमुत्पादयत्यारोग्याय, किटटं चमलानामेवमेव।

स्वमानातिरिक्ताः पुनरुत्सर्गिणः शीतोष्णपर्यायगुणैश्चोपचर्यमाणा मलाः शरीर धातुसाम्यकरा:  
समुपलभ्यन्ते॥४॥

tatrāhāraprasādākhyō Rasaḥ kiṭṭam ca malākhyamabhinirvartatē| kiṭṭat  
svēdamūtrapurīṣavātaPittaślēśmāṇah  
karṇākṣināśikāsyalōmakūpaprajananaṁalāḥkēśāśmaśrulōmanakhādayaścāvayavāḥ  
puṣyantil puṣyanti tvāhāraraśādRasarudhiramāṁsamēdōsthīMajjāśukraujāṁsi  
pañcēndriyadravyāṇidhātuprasādaśañjñakāni  
śarīRasandhibandhapicchādayaścāvayavāḥ| tē sarva ēva dhātavō malākhyāḥ  
prasādākhyāśca Rasamalābhyaṁ puṣyantah svam  
mānamanuvartantēyathāvayaḥśarīram| ēvarā Rasamalau  
svapramāṇāvasthitāvāśrayasya samadhātōrDhātusāmyamanuvartayataḥ| nimittatastu  
kṣīṇavṛddhānāṁ prasādākhyānāṁ dhātūnāṁ vṛddhikṣayābhyaṁhāramūlābhyaṁ  
Rasaḥsāmyamutpādayatyārōgyāya, kiṭṭam ca malānāmēvamēva| svamānātiriktāḥ  
punarutsargiṇah sītōṣṇaparyāyaguṇaiścōpacaryamāṇā malāḥ śarīra  
Dhātusāmyakarāḥsamupalabhyantē||4||

tatrAhArapRasadAkhyo RasaH kiTTaM ca malAkhyamabhinirvartate| kiTTAt  
svedamUtrapurIshaVātaPittashleShmA NaH  
karNAkShinAsikAsyalomakUpaprajananaṁalAHkeshashmashrulomanakhAdayashcAva  
yavAH puShyantil puShyanti tvAhAraRasadRasarudhiraMaṁsa  
medosthiMajjāŚukraujAMsi pa<sub>j</sub>endriyadravyANidhAtupRasadasa<sub>j</sub>j~jakAni  
sharIRasandhibandhapicchAdayashcAvayavAH| te sarva eva dhAtavo malAkhyAH  
pRasadAkhyAshca RasamalAbhyAM puShyantaH svam  
mAnamanuvartanteyathAvayaHsharIram| evaM Rasamalau

svapramANAvasthitAvAshrayasya samadhAtorDhātusAmyamanuvartayataH|  
 nimirattastu kShINavRuddhAnAM pRasadAkhyAnAM dhAtUnAM  
 vRuddhikShayAbhyAmAhAramUIAbhyAMRasaH sAmyamutpAdayatyArogyAya, kiTTaM  
 ca malAnAmevameva| svamAnAtirkitAH punarutsargiNaH  
 shltoShNaparyAyaguNaishcopacaryamANA malAH sharIraDhātusAmyakarAH  
 samupalabhyante||4||

The food gets transformed into two forms i.e. *prasada* or essence form (*ahara rasa*) and *kitta* (the waste form).

The *kitta* part nourishes mala or excretory products like sweat, urine, stool, vata, pitta, kapha, excreta of the ear, nose, mouth, hair follicle, excreta of genital organs, scalp hair, beard, body hair, nails, etc.

The essence part or *ahara rasa* nourishes body components (dhatu) like rasa dhatu (body fluids), rakta dhatu (blood), mamsa dhatu (flesh), meda dhatu (fat), asthi dhatu (bone), majja dhatu (bone marrow), shukra dhatu (reproductive elements like semen and ovum), oja (essence of the seven fundamental tissue elements), basic components of five sense organs, joints, ligaments, tendons and mucilage part in the body.

All the mala (wastes) and dhatu (tissue elements) of the body are nourished by the waste part of food and essence of food or *ahara rasa* respectively.

The rasadi dhatu and mala or waste products are nourished so that the quality is maintained according to the size and age of the body.

Thus, after digestion, the essence and waste of food in their normal quantity maintain the equilibrium of tissues.

The tissue elements may increase or decrease due to some etiology, which can be normalized by the essence part of digested food in decreased or increased quantity. Similarly, mala can be transformed into the waste part of *ahara rasa*. The waste products, when in excess, can be excreted and the status of the body can be brought to equilibrium through treatments with the therapies having opposite qualities like hot, cold, etc. [4]

### Channels for the nourishment of tissues

तेषां तु मलप्रसादाख्यानां धातूनां स्रोतांस्ययनमुखानि।  
 तानि यथाविभागेन यथास्वं धातूनापूरयन्ति।  
 एवमिदं शरीरमशितपीतलीढ़खादितप्रभवम्।  
 अशितपीतलीढ़खादितप्रभवाश्चास्मिन् शरीरे व्याधयो भवन्ति।  
 हिताहितोपयोगविशेषास्त्वत्र शुभाशुभविशेषकरा भवन्तीति॥५॥

tēṣāṁ tu malaprasādākhyānāṁ dhātūnāṁ srōtāṁsyayanamukhāni] tāni  
 yathāvibhāgēna yathāsvāṁ dhātūnāpūrayanti] ēvamidaṁ

śarīramaśitapītalīdhakhāditaprabhavam| aśitapītalīdhakhāditaprabhavāścāsmiñ śarīrē vyādhayō bhavantij hitāhitōpayōgaviśeṣāstvatra śubhāśubhaviśeṣakarā bhavantīti||5||

teShAM tu malapRasadAkhyAnAM dhAtUnAM srotAMsyayanamukhAni| tAni  
yathAvibhAgena yathAsvaM dhAtUnApUrayanti| evamidaM  
sharIramashitaPītalīDhakhAditaprabhavam| ashitapītalīDhakhAditaprabhavAshcAsmi~j  
sharIre vyAdhayo bhavantij hitAhitoPayogavisheShAstvatra  
shubhAshubhavisheShakarA bhavantīti||5||

The nourishing as well as excretory products enter different channels of circulation and nourish the respective dhatu. Thus, this body is maintained by the nourishment drawn from eatables, drinkables, linctuses, and chewable (food).

The diseases could also be caused by these sources (i.e., eatables, etc.).

Intake of wholesome and unwholesome food results in positive health and diseases respectively. [5]

### Query of Agnivesha

एवंवादिनं भगवन्तमात्रेयमग्निवेश उवाच-दृश्यन्ते हि भगवन्! हितसमाख्यातमप्याहारमुपयुज्जाना  
व्याधिमन्तश्चागदाश्च, तथैवाहितसमाख्यातम्; एवं दुष्टे कथं हिताहितोपयोगविशेषात्मक  
शुभाशुभविशेषमुपलभामह इति॥६॥

ēvarṁvādinam bhagavantamātrēyamagnivēśa uvāca- dṛśyantē hi  
bhagavan!hitasamākhyātamapyaḥāramupayuñjānā vyādhimantaścāgadāśca,  
tathaivāhitasamākhyātam; ēvarṁ duṣṭekathām hitāhitōpayōgaviśeṣātmakāṁ  
śubhāśubhaviśeṣamupalabhbāmaha iti॥६॥

evaMvAdinaM bhagavantamAtreyamagnivesha uvAca- dRushyante hi  
bhagavan!hitasamAkhyAtamapyAhAramupayu~jjAnA vyAdhimantashcAgadAshca,  
tathaivAhitasamAkhyAtam; evaMdusTe kathaM hitAhitoPayogavisheShAtmakaM  
shubhAshubhavisheShamupalabhbAmaha iti॥६॥

After hearing an explanation of Lord Atreya, Agnivesha said “Oh Lord, some individuals consuming wholesome food get afflicted with diseases, while some individuals consuming unwholesome food remain healthy. In this regard, how does one infer that health and disease are influenced by wholesome and unwholesome foods respectively?”. [6]

### Answer by Atreya about causative factors of disease and immunity

तमवाच भगवानात्रेयः- न हिताहारोपयोगिनामग्निवेश! तन्निमित्ता व्याधयो जायन्ते, न च केवलं  
हिताहारोपयोगादेवसर्वव्याधिभयमतिक्रान्तं भवति, सन्ति हयूतेऽप्यहिताहारोपयोगादन्या रोगप्रकृतयः;  
तद्यथा- कालविपर्ययः, प्रजापराधः, शब्दस्पर्शरूपरसगन्धाश्चासात्म्या इति।

ताश्च रोगप्रकृतयो रसान् सम्यगुपयुज्जानमपि पुरुषमशुभेनोपपादयन्ति; तस्माद्धिताहारोपयोगिनोऽपि  
दृश्यन्तेव्याधिमन्तः।

अहिताहारोपयोगिनां पुनः कारणतो न सद्यो दोषवान् भवत्यपचारः।

न हि सर्वाण्यपथ्यानि तुल्यदोषाणि, न च सर्वे दोषास्तुल्यबलाः, न च सर्वाणि शरीराणि व्याधिक्षमत्वे समर्थनि भवन्ति।

तदेव ह्यपथ्यं देशकालसंयोगवीर्यप्रमाणातियोगादभूयस्तरमपथ्यं सम्पद्यते।

स एव दोषः संसृष्टयोनिर्विरुद्धोपक्रमो गम्भीरानुगतश्चिरस्थितः प्राणायतनसमुत्थो मर्मोपघाती कष्टतमः क्षिप्रकारितमश्चसम्पद्यते।

शरीराणि चातिस्थूलान्यतिकृशान्यनिविष्टमांसशोणितास्थीनि दुर्बलान्यसात्म्याहारोपचितान्यल्पाहाराण्यल्पसत्त्वानि चभवन्त्यव्याधिसहानि, विपरीतानि पुनर्व्याधिसहानि।

एभ्यश्चैवापथ्याहारदोषशरीरविशेषेभ्यो व्याधयो मृदवो दारुणाः क्षिप्रसमुत्थाश्चिरकारिणश्च भवन्ति।

त एव वातपित्तश्लेष्माणः स्थानविशेषे प्रकुपिता व्याधिविशेषानभिनिर्वर्तयन्त्यग्निवेश!||७||

tamuvāca bhagavānātrēyah- na hitāhārōpayōgināmagnivēśa! tannimittā vyādhayō jāyantē, na ca kēvalamhitāhārōpayōgādēva sarvavyādhhibhayamatikrāntam bhavati, santi hyṛtē'pyahitāhārōpayōgādanyārōgaprakṛtayah, tadyathā- kālaviparyayaḥ, prajñāparādhaḥ, śabdasparsarūpaRasagandhāscāsātmyā iti| tāscā rōgaprakṛtayō rasān samyagupayuñjānamapi puruṣamaśubhēnōpapādayanti;tasmāddhitāhārōpayōginō'pi dṛśyatē vyādhimantah| ahitāhārōpayōginām punah kāraṇatō na sadyō dōśavān bhavatyapacārah| na hi sarvānyapathyāni tulyadōśāṇi, na ca sarvē dōśastulyabalāḥ, na ca sarvāṇi śarīrāṇi vyādhikṣamatvēsamarthāni bhavanti| tadēva hyapathyām dēśakālasaṁyōgavīryapramāṇātiyōgādbhūyastaramapathyām sampadyatē| sa ēva dōśah samsṛṣṭayōnirviruddhōpakramō gambhīrānugataściraṁsthitaḥ prāṇāyatanaṁsamutthōmarmōpaghātī kaṣṭatamaḥ kṣiprakāritamaśca sampadyatē| śarīrāṇi cātisthūlānyatikṛśānyaniviṣṭamāṁsaśōṇitāsthīnidurbalānyasātmyāhārōpacitānyalpāhārā ḷyalpasattvāni ca bhavantyavyādhisahāni, viparītānipunarvyādhisahāni| ēbhyaścaivāpathyāhāradōṣaśarīravīśēbhyo vyādhayō mṛḍavō dāruṇāḥ kṣipRasamutthāściraṁkāriṇāścabhavanti| ta ēva vātaPittaśleśmāṇah sthānaviśēṣē prakupitā vyādhiviśēṣānabhinirvartayantyagnivēśa!||७||

tamuvAca bhagavAnAtreyaH- na hitAhAropayoginAmagnivesha! tannimittA vyAdhayo jAyante, na cakevalaM hitAhAropayogAdeva sarvavyAdhibhayamatikrAntaM bhavati, santihyRute~apyahitAhAropayogAdanyA rogaprakRutayah, tadyathA- kAlaviparyayaH, praj~jAparAdhaH,shabdasparsharUpaRasagandhAshcAsAtmyA iti| tAshca rogaprakRutayo Rasan samyagupayu~jjAnamapi puruShashubhenopapAdayanti;tasmAddhitAhAropayogino~api dRushyante vyAdhimantaH| ahitAhAropayoginAM punaH kAraNato na sadyo doShavAn bhavatyapacAraH| na hi sarvĀNyapathyAni tulyadoShANi, na ca sarve DosastulyabalAH, na ca sarvANI sharIraNivAdhikShamatve samarthAni bhavanti| tadeva hyapathyāM deshakAlasaMyogavīryapramANAtyogAdbhUyastaramapathyāM sampadyate| sa eva doShaH saMsRuShTayonirviruddhopakramo gambhIrnugatascirasthitaH PrāṇāyatanaṁsamutthomarmopaghAtI kaShTatamaH

kShiprakAritamashca sampadyate| sharIrANi  
cAtisthUIAnyatikRushAnyaniviShTaMaṇsa  
shoNitAsthInidurbalAnyasAtmyAhAropacitAnyalpAhArANyalpasattvAni ca  
bhavantyavyAdhisahAni, viparItAnipunaryAdhisahAni|  
ebhyashcaivApathyAhAraDoṣasharIrvisheshebhyo vyAdhayo mRudavo  
dAruNAHkShipRasamutthAshcirakAriNashca bhavanti| ta eva VātaPittashleShmANaH  
sthānavisheShe prakupitAvyAdhivisheShAnabhinirvartayantyagnivesha!||7||

Lord Atreya replied:

An individual consuming wholesome food will not get afflicted with disease due to the food. Intake of wholesome food alone is not the causative factor for a disease or can prevent diseases. Apart from unwholesome food, there are many other etiological factors that lead to a disease, such as changes in season, intellectual errors, unwholesome contacts, excessive, wrong and over-utilization of senses of sound, touch, vision, taste and smell.

These etiological factors can cause diseases in an individual despite wholesome intake of tastes (rasa) and diet. Hence, an individual taking wholesome food has also been observed to have taken ill.

Similarly, consuming unwholesome diet does not immediately produce untoward effects. All unwholesome food articles are not equally harmful, all the dosha are not of equal strength, and all the bodies are not capable of preventing disease.

Unwholesome food can be more harmful depending upon the habitat, season, combination, potency, and intake in excessive quantity.

The dosha become acute and extremely difficult to manage when they get associated with multiple factors, treated with wrong therapies, become deep rooted, chronic, get vitiated in one of the ten seats of *prana*, and when they afflict vital centers within the body known as *marma*.

Individuals, who are excessively obese, emaciated, whose muscles, blood, bones are depleted, who are physically very weak, who are habituated to consuming unwholesome food, who take in inadequate quantities of food, and who have very weak mind cannot withstand diseases. Contrary to this, individuals having opposite qualities to the ones mentioned above are capable of resisting diseases. Thus, unwholesome diet, dosha, and body constitution factors produce diseases of mild, severe, acute and chronic nature. [7]

### Description of diseases affecting various dhatu (tissue)

तत्र रसादिषु स्थानेषु प्रकुपितानां दोषाणां यस्मिन् स्थाने ये ये व्याधयः सम्भवन्ति तांस्तान्  
यथावदनुव्याख्यास्यामः||८||

tatra rasādiṣu sthānēṣu prakupitānāṁ dōṣānāṁ yasmin sthānē yē yē vyādhayah  
sambhavanti tāṁstānyathāvadanuvyākhyāsyāmaḥ||8||

tatra RasadiShu sthAneShu prakupitAnAM doShANAM yasmin sthAne ye ye  
vyAdhayaH sambhavantitAMstAn yathAvadanuvyAkhyAsyAmaH||8||

The specific diseases caused due to vitiated dosha in the seats of rasa dhatu, rakta, etc. dhatu will be explained further. [8]

#### *Diseases due to vitiation of rasa dhatu*

अश्रद्धा चारुचिश्चास्यवैरस्यमरसज्ञता| हृल्लासो गौरवं तन्द्रा साङ्गमर्दो ज्वरस्तमः ||९||

पाण्डुत्वं सोतसां रोधः क्लैब्यं सादः कृशाङ्गता| नाशोऽग्नेरयथाकालं वलयः पलितानि च||१०||

रसप्रदोषजा रोगा,...||११||

aśraddhā cāruciścāsyavairasyamaRasajñatāḥ hr̥lāsō gauravaṁ tandrā sāṅgamardō jvarastamah ||9||

pāṇḍutvam̄ srōtasām̄ rōdhaḥ klaibyaṁ sādaḥ kṛśāṅgatāḥ nāśo'gnērayathākālām̄ valayaḥ palitāni ca||10||

Rasapradōṣajā rōgā,...||11||

ashraddhA cArucishcAsyavairasyamaRasaj~jatAḥ hRullAso gauravaM tandrA  
sA~ggamardo jvarastamah ||9||

pANDutvam̄ srotasAM rodhaH klaibyaM sAdaH kRushA~ggatAḥ  
nAsho~agnerayathAkAlaM valayaH palitAni ca||10||

RasapradoShajA rogA,...||11||

Aversion towards food, anorexia, altered sense of taste, inability to identify tastes, nausea, heaviness in the body, drowsiness, body ache, fever, blackouts, anemia, obstruction of channels, impotence, tiredness (*angavasada*), emaciation, diminished agni, and premature aging (wrinkling of skin and graying of hair) are some of the disorders caused due to vitiation of *rasa*. [9-11]

#### *Diseases due to vitiation of rakta*

dhatu

...वक्ष्यन्ते रक्तदोषजाः| कुष्ठवीसर्पपिडका रक्तपित्तमसृग्दरः||११||

गुदमेद्रास्यपाकश्च प्लीहा गुल्मोऽथ विद्रधिः| नीलिका कामला व्यङ्गः पिप्पलवस्तिलकालकाः||१२||

दद्रुचर्मदलं शिव्रं पामा कोठास्मण्डलम्| रक्तप्रदोषाज्जायन्ते,...||१३||

...vakṣyantē Rakta dōṣajāḥ| kuṣṭhavīsarpapiḍakā Rakta Pittamasrgdarah||11||

gudamēḍhrāsyapākaśca plīhā gulmō'tha vidradhiḥ| nīlikā kāmalā vyaṅgaḥ  
pipplavastilakālakāḥ||12||

dadruścarmadalam̄ śvitram̄ pāmā kōṭhāsramaṇḍalam| Rakta pradōṣājjāyantē,...||13||

...vakShyante Rakta doShajAH| KuṣṭhavlsarpapiDakA Rakta PittamasRugdaraH||11||

gudameDhrAsyapākashca plihA gulmo~atha vidradhiH| nllikA kAmalA vyā~ggaH  
piplavastilakAlakAH||12||

dadrushcarmadalaM shvitraM pAmA koThAsramaNDalam| Rakta  
pradoShAjjAyante,...|13|

The following diseases are caused due to vitiation of rakta: Skin disorders including *kushtha*, erysipelas (*visarpa*), furuncles (*pidaka*), *raktapitta* (a kind of bleeding disorder), menorrhagia (*asrugdara*), inflammation of anus, penis, oral cavity, splenic disorders (*pliha*), abdominal lump (*gulma*), abscess (*vidradhi*), blue mole (*nilika*), jaundice (*kamala*), freckles/blemish (*vyanga*), portwine mark (*piplu*), black mole of the size of sesame seed (*tilakalaka*), ringworm (*dadru*), dermatitis (*charmadala*), leucoderma (*svitra*), scabies (*pama*), urticaria (*kotha*), and circular erythema (*asra mandala*). [11-13]

#### *Diseases due to vitiation of mamsa*

dhatu

...शृणु मांसप्रदोषजान्॥१३॥

अधिमांसार्बुदं कीलं गलशालूकशुण्डिके। पूतिमांसालजीगण्डगण्डमालोपजिह्विका:॥१४॥

विद्यान्मांसाश्रयान्,...|14|

...śṛṇu māṁsapradōṣajān||13||

adhimāṁsārbudam kīlam galaśālūkaśuṇḍikē|  
pūtimāṁsālajīgaṇḍagaṇḍamālōpajihvikāḥ||14||

vidyānmāṁsāśrayān,...|15|

...shRuNu Maṁsa pradoShajAn||13||

adhiMaṁsa rbudam kīlaM galashAIUkashuNDike| pUtiMaṁsa  
lajgaNDagaNDamAlopajihvikAH||14||

vidyAnMaṁsa shrayAn,...|15|

Following diseases are caused due to vitiation of mamsa dhatu: *adhimamsa* (granuloma), *arbuda* (myoma), *kila* (piles), *galashaluka* (uvulitis), *galashundika* (tonsillitis), *putimamsa* (gangrene), *alaji* (boils), *ganda* (goiter), *gandamala* (cervical lymphadenitis) and *upajihvika* (inflammation of epiglottis). [13-15]

#### *Diseases due to vitiation of meda dhatu*

.. मेदःसंश्रयांस्तु प्रचक्षमहे। निन्दितानि प्रमेहाणां पूर्वरूपाणि यानि च॥१५॥

.. mēdaḥsaṁśrayāṁstu pracakṣmahē| ninditāni pramēhāṇāṁ pūrvarūpāṇi yāni ca||15||

... medaHsaMshrayAMstu pracakShmahe| ninditAni pramehANAM pUrvarUpANi yAni ca||15||

Premonitory symptoms of persistent urinary disorders including diabetes mellitus and eight undesirable types of physical constitutions, which are not appreciable in the society (to be avoided, described earlier in chapter 21 of *ashta nindita*) are produced due to vitiation of meda dhatu. [15]

#### *Diseases due to vitiation of asthi*

dhatu

अध्यस्थिदन्तौ दन्तास्थिभेदशूलं विवर्णता| केशलोमनखश्मश्रुदोषाश्चास्थिप्रदोषजाः||१६||

adhyasthidantau dantāsthibhēdaśūlam vivarnatā|  
kēśalōmanakhaśmaśrudōśāścāsthipradōśajāḥ||16||

adhyasthidantau dantAsthibhedashUlaM vivarNatA|  
keshalomanakhashmashruDośashcAsthipradoShajAH||16||

Hypertrophy of bones and teeth, splitting and severe pain in teeth and bone, discoloration, abnormality of body hair, nail and beard are the diseases caused due to vitiation of asthi dhatu. [16]

#### *Diseases due to vitiation of majja*

dhatu

रुक् पर्वणां भ्रमो मूच्छा दर्शनं तमसस्तथा| अरुषां स्थूलमूलानां पर्वजानां च दर्शनम्||१७||

मज्जप्रदोषात्, ...|18|

ruk parvaṇāṁ bhramo mūrcchā darśanāṁ tamasastathā| aruṣāṁ sthūlamūlānāṁ parvajānāṁ ca darśanam||17||

Majjāpradōṣāt, ...|18|

ruk parvaNAM bhramo mUrcchA darshanaM tamasastathA| aruShAM sthUlAmUIAnAM parvajAnAM ca darshanam||17||

MajjāpradoShAt, ...|18|

Pain in the joints, giddiness, unconsciousness, blackouts and deep rooted abscess in joints are caused due to vitiation of majja dhatu. [17-18]

#### *Diseases due to vitiation of shukra*

dhatu

...शुक्रस्य दोषात् क्लैब्यमहर्षणम्| रोगि वा क्लीबमल्पायुर्विरूपं वा प्रजायते||१८||

न चास्य जायते गर्भः पतति प्रस्वत्यपि| शुक्रं हि दुष्टं सापत्यं सदारं बाधते नरम्||१९||

...śukrasya dōṣāt klaibyamaharṣanam| rōgi vā klībamalpāyurvīrūpaṁ vā prajāyatē||18||  
na cāsyā jāyatē garbhāḥ patati prasravatyapi| śukram hi duṣṭam sāpatyam sadāram  
bādhatē naram||19||

...Śukrasya doShAt klaibyamaharShaNam| rogi vA klībamalpAyurvīrUpaM vA  
prajAyate||18||

na cAsya jAyate garbhāH patati prasravatyapi| ŚukraM hi duShTaM sApatyaM sadAraM  
bAdhate naram||19||

Due to vitiation of shukra dhatu, the person becomes sexually impotent, suffers from *aharshana* (inability to penetrate despite erection), and may have sick, impotent, and short-lived children with congenital abnormalities. There could be cases of no conception, or there will be spontaneous abortion. Thus, abnormalities of shukra dhatu result in misery for the individual as well as his family. [18-19]

#### *Disease of sense organs*

इन्द्रियाणि समाश्रित्य प्रकुप्यन्ति यदा मलाः| उपघातोपतापाभ्यां योजयन्तीन्द्रियाणि ते||२०||  
indriyāṇi samāśritya prakupyanti yadā malāḥ| upaghātōpatāpābhyāṁ yojayantīndriyāṇi  
tē||२०||

indriyANi samAshritya prakupyanti yadA malAH| upaghAtopatApAbhyAM  
yojayantIndriyANi te||२०||

When the dosha get vitiated in sense organs, they either cause impairment or deformity of the respective sense organ. [20]

#### *Diseases of ligaments, vessels, and tendons*

स्नायौ सिराकण्डराभ्यो दुष्टाः क्लिश्नन्ति मानवम्| स्तम्भसङ्कोचखल्लीभिर्गन्थस्फुरणसुप्तिभिः||२१||  
snāyau sirākāñḍarābhyō duṣṭāḥ kliśnanti mānavam|  
stambhasaṅkōcakhallībhīgranthisphuraṇasuptibhiḥ||२१||

snAyau sirAkaNDarAbhyo duShTAH klishnanti mAnavam|  
stambhasa~gkocakhalllbhirgranthisphuraNasuptibhiH||21||

Stiffness, contraction, and neuralgia of upper and lower extremities, tumor, throbbing sensation and numbness are produced by the vitiated dosha in ligaments, blood vessels and tendons. [21]

#### *Vitiation of mala by dosha*

मलानाश्रित्य कुपिता भेदशोषप्रदूषणम्| दोषा मलानां कुर्वन्ति सङ्गोत्सर्गावतीव च||२२||  
malānāśritya kupitā bhēdaśōṣapradūṣanam| dōṣā malānām kurvanti saṅgōtsargāvatīva  
ca||२२||

maIAnAshritya kUpitA bhedashoShapradUShaNam| doShA maIAnAM kurvanti  
sa~ggotsargAvatlva ca||22||

The aggravation of dosha in the mala of the body causes excess discharge (*bheda*) of mala(as in diarrhea), decrease or dryness of mala, and abnormalities on normal color, smell, etc. leading to their retention or excessive elimination. [22]

## Management principles

विविधादशितात् पीतादहिताल्लीढखादितात् भवन्त्येते मनुष्याणां विकारा य उदाहृताः॥२३॥  
तेषामिच्छन्ननुत्पत्तिं सेवेत मतिमान् सदा। हितान्येवाशितादीनि न स्युस्तज्जास्तथाऽमयाः॥२४॥  
रसजानां विकाराणां सर्वं लङ्घनमौषधम्। विधिशोणितिकेऽध्याये रक्तजानां भिषग्जितम्॥२५॥  
मांसजानां तु संशुद्धिः शस्त्रक्षाराग्निकर्म च। अष्टौनिन्दितिकेऽध्याये मेदोजानां चिकित्सितम्॥२६॥  
अस्थ्याश्रयाणां व्याधीनां पञ्चकर्माणि भेषजम्। बस्त्यः क्षीरसर्पीषि तिक्तकोपहितानि च॥२७॥  
मज्जशुक्रसमुत्थानामौषधं स्वादुतिक्तकम्। अन्नं व्यवायव्यायामौ शुद्धिः काले च मात्रया॥२८॥  
शान्तिरिन्द्रियजानां तु त्रिमर्मीये प्रवक्ष्यते। स्नायवादिजानां प्रशमो वक्ष्यते वातरोगिके॥२९॥  
नवेगान्धारणेऽध्याये चिकित्सासङ्ग्रहः कृतः। मलजानां विकाराणां सिद्धिश्चोक्ता क्वचित्क्वचित्॥३०॥  
vividhādaśītāt pītādahitālīḍhakhādītāt bhavantyētē manusyāṇāṁ vikārā ya  
udāhṛtāḥ॥२३॥  
tēśāmicchannanutpattim sēvēta matimān sadāḥ hitānyēvāśītādīni na  
syustajjāstathā”mayāḥ॥२४॥  
Rasajānāṁ vikārāṇāṁ sarvam̄ laṅghanamauṣadham| vidhiśōṇitikē’dhyāyē Rakta jānāṁ  
bhiṣagjītam॥२५॥  
māṁsajānāṁ tu saṁsuddhiḥ śastrakṣārāgnikarma ca| aṣṭauninditikē’dhyāyē  
mēdōjānāṁ cikitsitam॥२६॥  
asthyāśrayāṇāṁ vyādhīnāṁ pañcakarmāṇi bhēṣajam| bastyah kṣīRasarpīṁśi  
tiktakōpahitāni ca॥२७॥  
MajjāśukRasamuthānāmauṣadham svādutiktakam| annāṁ vyavāyavyāyāmau śuddhiḥ  
kālē ca mātrayā॥२८॥  
śāntirindriyajānāṁ tu trimarmīyē pravakṣyatē| snāyvādījānāṁ praśamō vakṣyatē  
vātarōgikē॥२९॥  
navēgāndhāraṇē’dhyāyē cikitsāsaṅgrahah kṛtaḥ| malajānāṁ vikārāṇāṁ siddhiścōktā  
kvacitkvacit॥३०॥  
vividhAdashitAt pltAdahitAllDhakhAditAt| bhavantyete manuShyANAM vikArA ya  
udAhRutAH॥२३॥

teShAmicchannanutpattiM seveta matimAn sadA| hitAnyevAshitAdIni na  
syustajjAstathA<sub>a</sub>amayAH||24||

RasajAnAM vikArANAM sarvaM la~gghanamauShadham| vidhishoNitike~adhyAye  
Rakta jAnAM bhiShagjitam||25||

Maṁsa jAnAM tu saMshuddhiH shastrakShArAgnikarma ca| aShTauninditike~adhyAye  
medojAnAM cikitsitam||26||

asthyAshrayANAM vyAdhInAM pa~jcakarmANi bheShajam| bastyaH kShIRasarpIMShi  
tiktakopahitAni ca||27||

MajjāŚukRasamutthAnAmauShadhaM svAdutiktakam| annaM vyavAyavyAyAmau  
shuddhiH kAle ca mAtrayA||28||

shAntirindriyajAnAM tu trimarmlye pravakShyate| snAyvAdijAnAM prashamo vakShyate  
Vātarogike||29||

navegAndhAraNe~adhyAye cikitsAsa~ggrahaH kRutaH| malajAnAM vikArANAM  
siddhishcoktA kvacitkvacit||30||

Various diseases produced due to the intake of unwholesome eatables, drinkables, linctuses, and chewables have been illustrated.

- An intelligent individual desirous of preventing such disease should take wholesome food.
- Langhana(lightening) is the line of treatment for all the rasa dhatuja disorders.
- Treatment of raktaja disorders is mentioned in Vidhishonitiya Adhyaya (Charak Samhita Sutra Sthana 24th chapter).
- The mamsa dhatuja disorders should be treated with purification, surgery, utilizing *alkali* and *agnikarma* (cauterization).
- The treatment of meda dhatu disorders is mentioned in Ashtauninditiya Adhyaya (Charak Samhita, Sutra Sthana 21st chapter).

The asthi dhatugata disorders should be treated with Panchakarma, especially basti (enema) prepared with bitter drugs, milk, and ghee.

Majja dhatu and shukra dhatugata disorders should be treated with diet having sweet and bitter taste, coitus, exercise and timely purification as required.

The treatment of disorders of sense organs is mentioned in Trimarmiya Chikitsa (Charak Samhita, Chikitsa Sthana, 26th chapter).

The treatment of disorders of ligaments, blood vessels, and tendons is mentioned in Vatavyadhi Chikitsa (Charak Samhita, Chikitsa Sthana, 28th chapter).

The treatment of disorders of waste products is mentioned in Naveganadharaniya Adhyaya (Charak Samhita, Sutra Sthana, 7th chapter) and few aspects in other sections. [23-30]

## Movement of dosha from *koshtha* (gut) to *shakha* (periphery)

व्यायामादूषणस्तैक्षण्याद्धितस्यानवचारणात् कोष्ठाच्छाखा मला यान्ति द्रुतत्वान्मारुतस्य च||३१||

तत्रस्थाश्च विलम्बन्ते कदाचिन्न समीरिताः। नादेशकाले कुप्यन्ति भूयो हेतुप्रतीक्षिणः॥३२॥

vyāyāmādūṣmaṇastaikṣṇyāddhitasyānavacāraṇāt| kōṣṭhācchākhā malā yānti  
drutatvānmārutasya ca||31||

tatrasthāśca vilambantē kadācinna samīritāḥ| nādēśakālē kupyanti bhūyō  
hētupratīkṣināḥ॥३२॥

vyAyAmAdUShmaNastaikShNyAddhitasyAnavacAraNAAt| KoṣṭhacchAkhA malA yAnti  
drutatvAnmArutasya ca||31||

tatrasthAshca vilambante kadAcinna samlritAH| nAdeshakAle kupyanti bhUyo  
hetupratlkShiNaH||32||

As mentioned earlier, the vitiated doshas move from the alimentary tract region (*koshtha*) to the periphery (*shakha*) i.e. raktadi dhatus and skin - due to several reasons such as excessive exercise, excessive heat, intake of unwholesome diet and regimen, and an excess pressure of fast-moving vata. These vitiated dosha stay in the peripheral regions in a dormant state and do not cause any disease till the season or environment is conducive for them to act. The dosha wait for other favorable provocative factors in the form of the region, season, etc. to cause diseases. [31-32]

## Movement of dosha from *shakha* to *koshtha*

वृद्ध्या विष्यन्दनात् पाकात् स्रोतोमुखविशेधनात्। शाखा मुक्त्वा मलाः कोष्ठं यान्ति वायोश्च  
निग्रहात्॥३३॥

vṛddhyā viṣyandanāt pākāt srōtōmukhaviśodhanāt| śākhā muktvā malāḥ kōṣṭham yānti  
vāyōśca nigrahāt॥३३॥

vRuddhyA viShyandanAt pākat srotomukhavishodhanAt| Shākhā muktvA malAH  
Koṣṭham yAnti vAyoshca nigrahAt||33||

The dosha leave the *shakha* (extremities or peripheral regions) and come to *koshtha* (alimentary tract) due to aggravation, liquefaction, suppuration, clearing of the obstacle at the opening of the channels, or pacification of vata. [33]

## Prevention of diseases

अजातानामनुत्पत्तौ जातानां विनिवृत्तये। रोगाणां यो विधिर्दृष्टः सुखार्थी तं समाचरेत्॥३४॥

सुखार्थः सर्वभूतानां मताः सर्वाः प्रवृत्तयः। ज्ञानाज्ञानविशेषात् मार्गमार्गप्रवृत्तयः॥३५॥

ajātānāmanutpattau jātānāṁ vinivṛttayē| rōgānāṁ yō vidhirdṛṣṭah sukhārthī tam  
samācarēt॥३४॥

sukhārthāḥ sarvabhūtānāṁ matāḥ sarvāḥ pravṛttayahḥ jñānājñānaviśeṣāttu  
mārgāmārgapraवृttayahḥ||35||

ajAtAnAmanutpattau jAtAnAM vinivRuttaye| rogANAM yo vidhirdRuShTaH sukhArthI  
taM samAcaret||34||

sukhArthAH sarvabhUtAnAM matAH sarvAH pravRuttayaH| j<sub>jAnA</sub>jAnavisheShAttu  
mAgaMArgapraवRuttayaH||35||

An individual desirous of happiness should follow the regimen advocated in this scripture for prevention and management of the manifested diseases. All living beings strive in this direction to attain the goal of staying happy, and they follow the right and wrong path depending on their awareness and ignorance. [34-35]

### Benefits and harms of observing and non-observance of regimen

हितमेवानुरुद्ध्यन्ते प्रपरीक्ष्य परीक्षकाः। रजोमोहावृत्तात्मानः प्रियमेव तु लौकिकाः॥३६॥

श्रुतं बुद्धिः स्मृतिर्दाक्ष्यं धृतिर्हितनिषेवणम्। वाग्विशुद्धिः शमो धैर्यमाश्रयन्ति परीक्षकम्॥३७॥

लौकिकं नाश्रयन्त्येते गुणा मोहरजःश्रितम्। तन्मूला बहवो यन्ति रोगाः शारीरमानसाः॥३८॥

hitamēvānurudhyantē praparīkṣya parīkṣakāḥ| rajomōhāvṛtātmānah priyamēva tu  
laukikāḥ||36||

śrutam buddhiḥ smṛtirdākṣyam dhṛtirhitaniśevaṇam| vāgviśuddhiḥ śamō  
dhairyamāśrayanti parīkṣakam||37||

laukikam nāśrayantyētē guṇā mōharajahśritam | tanmūlā bahavō yanti rōgāḥ  
śārīramānasāḥ||38||

HitamevAnurudhyante praparIkShya parIkShakAH| rajomohAvRutAtmAnaH priyameva  
tu laukikAH||36||

shrutaM buddhiH smRutirdAkShyaM dhRutirhitaniShevaNam| vAgvishuddhiH shamo  
dhairyamAshrayanti parIkShakam||37||

laukikaM nAshrayantyete guNA moharajaHshritam | tanmUIA bahavo yanti rogAH  
shAriramAnasAH||38||

An intelligent individual follows an effective regimen after a thorough evaluation of the disease and its etiological factors as well as his prakriti. An individual dominated by *Rajas* and *Tamas* mental faculty, on the other hand, follows a regimen that could be pleasant to his senses, without any consideration or evaluation of his condition, the treatment, and his constitution. An intelligent person possesses the qualities of obedience, intelligence, memory, stable, able, purity of speech, tranquility, courage, and follows a wholesome regimen. Ignorant individuals do not possess these qualities as their mind is enveloped in *moha* (attachments to possessions) and *rajas*. Hence they suffer from various physical and mental disorders. [36-38]

प्रज्ञापराधादृयहितानर्थान् पञ्च निषेवते। सन्धारयति वेगांश्च सेवते साहसानि च॥३९॥

तदात्वसुखसञ्जेषु भावेष्वजोऽनुरज्यते। रज्यते न तु विजाता विजाने हयमलीकृते॥४०॥

prajñāparādhāddhyahitānarthān pañca niṣēvatē| sandhārayati vēgāṁśca sēvatē  
sāhasāni ca॥39॥

tadātvasukhasañjñēsu bhāvēsvajñō'nurajyatē| rajyatē na tu vijñātā vijñānē  
hyamalīkṛtē॥40॥

praj~jAparAdhAddhyahitAnarthAn pa~jca niShevate| sandhArayati vegAMshca sevate  
sAhasAni ca॥39॥

tadAtvasukhasa<sub>jj</sub>jeShu bhAveShvaj<sub>jo</sub>anurajyate| rajyate na tu vij~jAtA vij~jAne  
hyamallkRute॥40॥

An ignorant individual, due to intellectual errors, indulges in unwholesome behavior with respect to the five sense organs, withholds the natural urges, and indulges in rash behavior which could be pleasant temporarily, but lead to misery in due course of time. A wise person due to his clarity of mind and awareness does not indulge in such activities and remains happy. [39-40]

### The importance of food

न रागान्नाप्यविजानादाहारानुपयोजयेत्। परीक्ष्य हितमश्नीयाददेहो हयाहारसम्भवः॥४१॥

na rāgānnāpyavijñānādāhārānupayojayēt| parīkṣya hitamaśnīyāddēhō  
hyāhāRasambhavaḥ॥41॥

na rAgAnnApyavij~jAnAdAhArAnupayojayet| parIkShya hitamashnlyAddeho  
hyAhARasambhavaH॥41॥

One should not take food with greed and ignorance. One should consume wholesome food after evaluation as the body is formed from food. [41]

आहारस्य विधावष्टौ विशेषा हेतुसञ्जकाः। शुभाशुभसमुत्पत्तौ तान् परीक्ष्य प्रयोजयेत्॥४२॥

āhārasya vidhāvaṣṭau viśeṣā hētusañjñakāḥ| śubhāśubhasamutpattau tān parīkṣya  
prayojayēt॥42॥

AhArasya vidhAvaShTau visheShA hetusa<sub>jj</sub>jakAH| shubhAshubhasamutpattau tAn  
parIkShya prayojayet॥42॥

Eight special factors are to be considered while consuming food. These factors should be evaluated before consuming food, as they are responsible for good and bad effects on the body. [43]

परिहार्याण्यपथ्यानि सदा परिहरन्नरः। भवत्यनृणां प्राप्तः साधूनामिह पण्डितः॥४३॥

यतु रोगसमुत्थानमशक्यमिह केनचित्। परिहर्तु न तत् प्राप्य शोचितव्यं मनीषिभिः॥४४॥

parihāryāṇyapathyāni sadā pariharannarah| bhavatyanṛnatāṁ prāptaḥ sādhūnāmiha paṇḍitah||43||

yattu rōgasamutthānamāśakyamiha kēnacit| parihartum na tat prāpya śocitavyam manīśibhiḥ||44||

parihAryANyapathyAni sadA pariharannaraH| bhavatyanRuNatAM prAptaH  
sAdhUnAmiha paNDitaH||43||

yattu rogasamutthAnamashakyamiha kenacit| parihartuM na tat prApya shocitavyaM  
manIshibhiH||44||

One should always avoid unwholesome food. If one gets afflicted with a disease despite leading a healthy lifestyle, then he is not at fault as it could be the effect of previous birth. [43-44]

## Summary

तत्र श्लोकाः- आहारसम्भवं वस्तु रोगाश्चाहारसम्भवाः। हिताहितविशेषाच्च विशेषः सुखदुःखयोः॥४५॥

सहत्वे चासहत्वे च दुःखानां देहसत्त्वयोः। विशेषो रोगसङ्घाश्च धातुजा ये पृथक्पृथक्॥४६॥

तेषां चैव प्रशमनं कोष्ठाच्छाखा उपेत्य च। दोषा यथा प्रकुप्यन्ति शाखाभ्यः कोष्ठमेत्य च॥४७॥

प्राजाज्योर्विशेषश्च स्वस्थातुरहितं च यत्। विविधाशितपीतीये तत् सर्वं सम्प्रकाशितम्॥४८॥

tatra ślōkāḥ- āhāRasambhavaṁ vastu rōgāścāhāRasambhavāḥ| hitāhitaviśēśācca viśēṣah sukhaduḥkhayōḥ||45||

sahatvē cāsaḥatvē ca duḥkhānāṁ dēhasattvayōḥ| viśēṣō rōgasāṅghāśca dhātujā yē pṛthakpṛthak||46||

tēṣāṁ caiva praśamanāṁ kōṣṭhācchākhā upētya ca| dōṣā yathā prakupyanti sākhābhyaḥ kōṣṭhamētya ca||47||

prājñājñayorviśēṣāśca svasthāturahitam ca yat| vividhāśitapītīyē tat sarvam̄ samprakāśitam||48||

tatra shlokAH- AhARasambhavaM vastu rogAshcAhARasambhavAH|  
hitAhitavisheShAcca visheShaH sukhaduHkhayoH||45||

sahatve cAsahatve ca duHkhAnAM dehasattvayoH | visheSho rogasa~gghAshca  
dhAtujA ye pRuthakpRuthak||46||

teShAM caiva prashamanaM KoṣṭhacchAkhA upetya ca| doShA yathA prakupyanti  
ShākhābhyaH Koṣṭhametya ca||47||

prAjAjayorvisheShashca svasthAturahitaM ca yat| vividhAshitapItlye tat sarvaM  
samprakAshitam||48||

The origin of life- and diseases - is food. Wholesome and unwholesome food articles are responsible for happiness and sorrow respectively. Food decides whether the human being can or can not sustain the diseases of body and mind.

Various diseases of each dhatu, and their treatment, the mode of movement of dosha from alimentary tract (koshtha) to periphery, i.e, rakta dhatu etc. dhatus and skin (shakha) and vice versa, features of intelligent and ignorant individuals, wholesome regimens for healthy and patients are highlighted in Vividhashitapitiya Adhyaya. [45-48]

## Tattva Vimarsha (Fundamental Principles)

- Food is considered as *prana* or vital force, hence in this chapter, the process of transformation of this food into dhatu or body tissue into a fuel that sustains prana has been mentioned elaborately. [2]
- *Panchabutagnis* are responsible for the digestion of specific components of food.
- If *dhatavagni*, *dhatvahi strotas* and *dhatuposhakrasavahiyana vayu* (enzymes for tissue metabolism, specific channels, and specific nutrient transporters) are normal, then normal tissues are created. All tissues, throughout life, continuously help in the nourishment of other tissues.
- The metabolic process of *ahara rasa* (the end product of digestion) results in the formation of nourishing and waste products.
- The body is formed from food, and even diseases also originate from food. Wholesome and unwholesome foods are responsible for happiness and unhappiness respectively. [Cha.Sa.Sutra Sthana 28/45]
- Apart from unwholesome food, many other etiological factors for disease production are present, like a change of season, intellectual errors, unwholesome contacts (excessive, wrong and over-utilization) of senses of sound, touch, vision, taste and smell. [Cha.Sa.Sutra Sthana 28/7]
- All unwholesome food articles are not equally harmful, all the dosha are not of equal strength, and all the bodies are not capable of preventing disease. [Cha.Sa.[Sutra Sthana 28/7]
- The doshas become acute and extremely difficult to manage when they get associated with multiple factors, get further aggravated or complicated when treated with a mutually contradictory therapy, become deep rooted, chronic, get vitiated in one of the ten seats of *prana*, and afflict vital centers of the body known as *marma*. [Cha.Sa.Sutra Sthana 28/7]
- Individuals, who are excessively obese, emaciated, whose muscles, blood and bone are depleted, who are very weak physically, who are habituated to unwholesome food, who consume inadequate quantities of food, and who possess weak mind cannot withstand diseases. [Cha.Sa.Sutra Sthana 28/7]
- The specific diseases (dhatu pradoshaja vikara) are caused due to an interplay between dosha and *dushya* and manifest as systemic disorders. [Cha.Sa.Sutra Sthana 28/8]

- All living beings strive to attain the goal of happiness and follow the right and the wrong path depending on their awareness and ignorance. [Cha.Sa.Sutra Sthana 28/35]
- Multiple factors are responsible for health and disease – a healthy person can contract a disease despite following a very healthy lifestyle.

## Vidhi Vimarsha (Applied Inferences)

### *Kshira Dadhi Nyaya* (milk-curd transformation phenomena/ analogy)

- The formation of *dhatu* involves the transformation of *rasa dhatu* into *rakta dhatu*, *rakta dhatu* into *mamsa dhatu*, etc., in the presence of respective *dhatvagni* in a similar manner as milk gets converted into curd, curds into butter and butter into ghee. According to Acharya Harita, within seven days *rasa dhatu* gets transformed into *shukra dhatu*. Even though this theory appears to be hypothetical, recent modern research has shown that this kind of transformation is possible. A team of Japanese and American scientists has managed to convert human skin cells into formed embryos by bathing them in weak citric acid for a duration of 30 minutes<sup>286</sup>. Researchers at Stanford University transformed skin fibroblast cells from mice into working neurons by inserting genes that encode transcription factors<sup>287</sup>. Researchers at Wake Forest University School of Medicine have successfully isolated stem cells from human skin, expanded them in the laboratory and coaxed them into becoming fat, muscle and bone cells Science daily, June 24, 2005, Source:Wake Forest University Baptist Medical Center, WINSTON-SALEM, N.C, available from

<http://www.sciencedaily.com/releases/2005/06/050623000101.htm>

. More recently, scientists have successfully made immature sperm cells from human bone marrow samples. Therefore, the formation of *shukra dhatu* from *majja dhatu* is proved by these scientific evidence<sup>288</sup> .

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<sup>286</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>287</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

<sup>288</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

## *Kedari Kulya Nyaya* (vascular network)

- According to *Kedari Kulya Nyaya* innumerable microvascular channels transport nourishment to their respective sites in dhatu [tissues] in the body. The cells and tissues are bathed with nutrient plasma. But mere tissue perfusion is not enough to complete the process of nourishment. It needs the complementary play of two subsequent *nyayas*. [Cha.Sa.Sutra Sthana 28/4], [Cha.Sa.Chikitsa Sthana 15/36]
- Per modern science, vesicles transport nutrients to the target organs and get controlled by a set of genes [discovered by Randy Schekman]. Further, James Rothman found out that protein machinery allows vesicles to fuse with their targets and permits transfer of nutrients to their target tissue. Thomas Sudhof revealed how signals instruct vesicles to release their cargo with precision. Through their discoveries, Rothman, Schekman and Sudhof have revealed the exquisitely precise control system for the transport and delivery of cellular cargo. Disturbances in this system have deleterious effects and contribute to conditions such as neurological diseases, diabetes, and immunological disorders.

## *Khale Kapota Nyaya* (distribution system)

- According to *Khale Kapota Nyaya* [distribution system], nutrients get directly absorbed by tissues selectively just as pigeons eat the grain of their choice. As per modern research, nutrients are transported to target tissues using vesicles and plasma binding/ transporter proteins when vesicles fuse with target membranes. Cells in those tissues have different organelles that produce various molecules like hormones, neurotransmitters, cytokines and enzymes etc. having specific functions that trigger at the right time and the target site.

## Cross references of physiological aspects

- *Rakta vibaddhamargatvan mamsa sinna prapadyate*.: If a channel is obstructed, the sequential transformation of tissue is impaired.
- Langhana (reducing therapy) is the line of treatment for all the rasa dhatuja [body fluids] disorders [Cha.Sa.Sutra Sthana 28/25].
- Treatment of raktaja [blood] disorders is mentioned in Vidhishonitiya Adhyaya [Cha.Sa.Sutra Sthana 24]. The treatment for raktaja vikara should be planned as per *raktapitta*, along with virechana, upavasa and *raktamokshana* [purgation, fasting, and bloodletting] [Cha.Sa.Sutra Sthana 24/18], [Cha.Sa Sutra Sthana 28/25]
- The mamsa dhatuja disorders should be treated with purification, surgery, usage of alkali and *agnikarma* [cauterization]. [Cha.Sa Sutra Sthana 28/26]
- The treatment of meda dhatuja” disorders is mentioned in Ashtauninditiya Adhyaya. [Cha.Sa.Sutra Sthana 21]
- *Guru Chatarpanam Dadhyat Sthulanam Karshanam Prati* diet modification, exercise, purification, and drugs. [Cha.Sa Sutra Sthana 21/20] [Cha.Sa Sutra Sthana 28/26]

- Asthi dhatugata disorders should be treated with Panchakarma, especially basti(enema) prepared from bitter drugs, milk and ghee should be administered. [Cha.Sa Sutra Sthana 28/27]
- Majja dhatu and shukra dhatugata disorders should be treated with food and drugs having a sweet and bitter taste. Coitus, exercise and timely purification as required should be engaged in [Cha.Sa Sutra Sthana 28/28].
- The treatment of disorders of sense organs is mentioned in Trimarmiya Chikitsa , [Cha.Sa.Chikitsa Sthana 26] [Cha.Sa Sutra Sthana 28/29].
- The treatment of disorders of ligaments, blood vessels, and tendons is mentioned in Vatavyadhi Chikitsa [Cha.Sa. Chikitsa Sthana 28] [Cha.Sa Sutra Sthana 28/30].
- The treatment of disorders of waste products is mentioned in Naveganadharaniya Adhyaya [Cha.Sa. Sutra Sthana 7] and few aspects in other sections [Cha.Sa., Sutra Sthana 28/30].

## Abbreviations

Cha. = Charak, Sa. = Samhita

## Related Chapters

Sroto Vimana

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## Dashapranayataneeya Adhyaya

### Sutra Sthana Chapter 29. The Ten Seats of Life Forces Abstract

As the name suggests, the chapter provides a brief description of the ten vital sites of life forces. The characteristics to define and distinguish between the qualified physician and the quack are detailed further. The qualified physician is said to be a “companion of the life forces” (pranabhisara) that dwell in the body, especially in the ten seats specified above. On the other hand, the quack is said to be a companion of diseases (roganamabhisara). In the process of enumerating the characteristics of the qualified physician, this chapter also gives a succinct summary of the entire Sutra Sthana, implying that it represents the core subjects and skills a physician needs to acquire. The behavior of the quack is then portrayed vividly, and the chapter concludes with an express warning to the patients to never fall prey to the quack. It is also made clear that the responsibility of licensing the qualified physicians and censuring the quacks rests with the King and the State.

**Keywords:** Ten seats of life forces, pranayatana, vital centers, qualities of pranabhisara, life saver physician, characteristics of rogabhisara(life destroyer), doctors, medical ethics, quack.

### Introduction

Of the thirty chapters in the Sutra Sthana of the Charak Samhita, the last two (29 and 30) are “independent” chapters since they are not part of any tetrad (or cluster of four chapters clubbed together by a common theme), like the way the rest of the Sutra Sthana has been structured. The 29th chapter serves to summarize the Sutra Sthana while the 30th chapter gives an overview of the entire text itself. Partly, the name of the chapter derives from the reference to the seats of the life forces in the previous chapter. The thread of thought is as follows. For the reason that these vital points were mentioned in the previous chapter creates an occasion for their further elaboration in the next chapter. As the Sutra Sthana is on the verge of being concluded, the topic of the vital points is used imaginatively to focus on the purpose of studying this section of the book.

There are two types of physicians in the world - the one who is qualified and other, who is an impostor. The qualified physician is one who has the certain knowledge of the self, the intellect, diseases, and the ten seats of the vital forces. Thus, the enumeration of the ten vital points is used to characterize the trained physician. The purpose of the Sutra Sthana is to lay the foundation for the creation of a competent physician. How can a physician gain competent knowledge about the ten seats of the life forces? The answer is, providing an elaborate listing of the core competencies that distinguishes a true physician from the fake, and more interestingly, answering what constitutes the core competence of the physician happens to be contents of the Sutra Sthana itself. Therefore, this chapter serves the purpose of also summarizing the contents of the

Sutra Sthana. In fact, it is the blueprint of the whole text. Therefore, Vagbhata explains that Sutra Sthana is so called because the subtle principles and concepts of Ayurveda are woven together in this section in such a way that it expands into the rest of the textbook. There is a saying in the tradition that if one master the essential chapters of the Sutra Sthana, one becomes a *Vaidya* already. The Ayurvedic approach to teaching a subject is holistic. Unlike a linear approach that would compartmentalize the subject into specific components, Ayurveda attempts to present the subject as a whole demonstrating the interconnections and relationships between the various components of a complex subject. Therefore, the Sutra Sthana captures the entire subject matter of Ayurveda. The remaining sections only elaborate what has already been described in a terse manner in the Sutra Sthana. Just like a seed contains all the parts of the plant and there is a simultaneous growth and expression of all the parts as it grows. Even so, the various concepts, theories, and practices of Ayurveda have to be learned in a holistic way. Sushruta uses the simile of a seed when he says his *Samhita* is designed to elaborate what is first comprehensively conveyed in a seed form. Sutra Sthana concludes by reviewing the contents of this section in the twenty-ninth chapter and by giving an overview of the whole treatise in the thirtieth chapter. The concept of the physician as a companion of the life forces is first introduced in an earlier chapter called Khuddakachatushpada. Though the word meaning *pranabhisara* means companion of life, it is interpreted in a different manner here. In the twenty-ninth chapter, the *pranabhisara* is one who has knowledge about the ten seats of the life forces as well as the intellect, senses, self and diseases. But in the ninth chapter, *pranabhisara* is one who has the knowledge of the text, its meaning, practical applications and the ability to teach practical skills to others. Chakrapani, the commentator, says that the *pranabhisara* is one who can hold back the life force that is on the verge of dissociating from the body. Essentially both these definitions mean the physician who is capable of saving the lives of the people.

After defining the true physician, the text then goes on to characterize the quacks, the impostors who are said to be the harbingers of diseases. Their behavior is described graphically. The statement in this chapter that there are two kinds of physicians contradicts an earlier statement made in the eleventh chapter of the Sutra Sthana called Tistraishaniya, where three kinds of physicians are described and defined. When we examine these classifications closely it can be understood that there are two types of quacks - one who dresses up and tries to imitate a real physician (*chhadmadhara bhishaka*) and the other who declares association with a well-known physician (*siddhasadhita*) in a bid to project himself as a genuine physician. In the thirtieth chapter, the quacks are described in one category. It is interesting to note that there is some discussion on the regulation of the profession. The responsibility of censuring quacks is vested with the King/State. Therefore, the text bluntly states that quacks roam around in the world because of the oversight of the King. And for the reason that the state may not be effective in eliminating the quacks, the text also issues a public warning to the laity, beseeching them to identify quacks and to never partake of the clinical services offered by them.

## Sanskrit text, Transliteration and English Translation

दशप्राणायतनीयाद्यायोपक्रमः:

The narration of the chapter on the ten seats of the life forces begins

अथातो दशप्राणायतनीयमध्यायं व्याख्यास्यामः||१||

इति ह स्माह भगवानात्रेयः||२||

athātō daśaprāṇāyatanīyamadhyāyāṁ vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAto dashaprANAyatanyamadhyAyaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Dashapranayataneeyā” (Ten principal seats of the life forces). Thus said Lord Atreya. [1-2]

### Ten principal seats of the life forces

दशैवायतनान्याहुः प्राणा येषु प्रतिष्ठिताः | शङ्खौ मर्मत्रयं कण्ठो रक्तं शुक्रौजसी गुदम्||३||

तानीन्द्रियाणि विजानं चेतनाहेतुमामयान् जानीते यः स वै विद्वान् प्राणाभिसर उच्यते||४||

daśaivāyatanānyāhuḥ prāṇā yēṣu pratiṣṭhitāḥ | śaṅkhau marmatrayaṁ kanṭhō raktam  
śukraujasī gudam||3||

tānīndriyāṇi vijñānam cētanāhētumāmayān| jānītē yaḥ sa vai vidvān prāṇābhīsara  
ucyatē||4||

dashaivAyatanAnyAhuH prANA yeShu pratiShThitAH| sha~gkhau marmatrayaM  
kaNTho raktaM shukraujasI gudam||3||

tAnIndriyANI vij~jAnaM cetanAhetumAmayAn| jAnlte yaH sa vai vidvAn prANAbhisara  
ucyate||4||

There are surely ten principal seats in which the life forces are established. The two temples, the three vital organs, the throat, rakta dhatu (blood), shukra dhatu (reproductive fluid), oja (the vital fluid) and the anus. The learned person who knows these as well as the sensory and motor organs, intelligence, the cause of consciousness as well as diseases is known as the companion of the life forces. [3-4]

**Cross-reference:** In Sankhya Sharira, Shankha (the temples) are replaced by nabhi and mamsa in the list of pranayatana.[Cha.Sa.Sharira Sthana 7/9]

## Two types of doctors

द्विविधास्तु खलु भिषजो भवन्त्यग्निवेश! प्राणानामेकेऽभिसरा हन्तारो रोगाणां, रोगाणामेकेऽभिसरा हन्तारःप्राणानामिति॥५॥

dvividhāstu khalu bhiṣajō bhavantyagnivēśa! prāṇānāmēkē'bhisarā hantārō rōgāṇāṁ, rōgāṇāmēkē'bhisarāhantārah prāṇānāmiti॥५॥

dvividhAstu khalu bhiṣajo bhavantyagnivesha! prANAnAmeke~abhisarA hantAro  
rogANAM, rogANAmeke~abhisarAhantAraH prANAnAmiti॥५॥

Surely, there are two types of physicians, Agnivesha! One who is a companion of the life forces and destroyer of diseases, and the other who is the companion of diseases and destroyer of the life process. [5]

### Qualities of *pranabhisara* (who protects life forces)

एवंवादिनं भगवन्तमात्रेयमग्निवेश उवाच- भगवंस्ते कथमस्माभिर्विदितव्या भवेयुरिति॥६॥

भगवानुवाच- य इमे कलीनाः पर्यवदातश्ताः परिष्टकर्माणो दक्षाः शुचयो जितहस्ता जितात्मानः सर्वोपकरणवन्तःसर्वेन्द्रियोपपन्नाः प्रकौत्तिजाः प्रतिपत्तिजाश्च ते जेयाः प्राणानामभिसरा हन्तारो रोगाणां, तथाविधा हि केवले शरीरज्ञानेशरीराभिनिर्वृत्तिज्ञाने प्रकृतिविकारज्ञाने च निःसंशयाः, सुखसाध्यकृच्छ्रसाध्याप्यप्रत्याख्येयानां च रोगाणांसमुत्थानपूर्वरूपलिङ्गवेदनोपशयविशेषज्ञाने व्यपगतसन्देहाः, त्रिविधस्यायर्वदसूत्रस्य ससङ्ग्रहव्याकरणस्यस्त्रिविधौषधग्रामस्य प्रवक्तारः, पञ्चत्रिंशतो मूलफलानां चतुर्णां च स्नेहानां पञ्चानां च लवणानामष्टानां च मत्राणामष्टानांच क्षीराणां क्षीरत्वग्रवृक्षाणां च षणां शिरोविरेचनादेश्च पञ्चकर्माश्रयस्यौषधगणस्याष्टाविंशतेश्च यवाग्नांदवात्रिंशतर्चर्णप्रदेहानां षणां च विरेचनशतानां पञ्चानां च कषायशतानां प्रयोक्तारः, स्वस्थवृत्तौविहितभोजनपाननियमस्थानचङ्कमणशयनासनमात्रादव्याञ्जनधूमनावनाभ्यञ्जन-परिमार्जनवेगाविधारणविधारणव्यायामसात्म्येन्द्रियपरीक्षोपक्रमणसद्वृत्तकृशलाः, चतुर्ष्पादोपगृहीते च भेषजे षोडशकलेसविनिश्चये सत्रिपर्यषणे सवातकलाकलज्ञाने व्यपगतसन्देहाः, चतुर्विधस्य च स्नेहस्य चतुर्विंशत्युपनयस्योपकल्पनीयस्य चतुःषष्ठिपर्यन्तस्य च व्यवस्थापयितारः, बहविधविधानयक्तानां च स्नेहयस्वेदयवम्यविरेच्यविधौषधोपचाराणां चकशलाः, शिरोरोगादेर्षांशविकल्पजस्य च व्याधिसङ्ग्रहस्य सक्षयपिङ्काविद्धेस्त्रयाणां च शोफानांबहविधशोफानबन्धानामष्टचत्वारिंशतश्च रोगाधिकरणानां चत्वारिंशदुत्तरस्य च नानात्मजस्य व्याधिशतस्य तथाविग्निहितातिस्थूलातिकृशानां सहेतुलक्षणोपक्रमाणां स्वप्नस्य च हिताहितस्यास्वप्नातिस्वप्नस्य च सहेतूपक्रमस्य षणां चलङ्घनादीनामुपक्रमाणां सन्तर्पणापतर्पणजानां च रोगाणां सरूपप्रशमनानां शोणितजानां च व्याधीनां मदमूर्च्छायसन्न्यासानांच सकारणरूपौषधोपचाराणां कुशलाः, कुशलाश्चाहारविधिविनिश्चयस्य प्रकृत्याहिताहितानामाहारविकाराणामव्यसङ्ग्रहस्यासवानां च चतुरशीतेद्रव्यगुणकर्मविनिश्चयस्य रसानुरससंश्रयस्यसविकल्पवैरोधिकस्य द्वादशवर्गश्रयस्य चान्नपानस्य सगणप्रभावस्य सानुपानगुणस्य नवविधस्यार्थसङ्ग्रहस्याहारगतेश्चहिताहितोपयोगविशेषात्मकस्य च शुभाशुभविशेषस्य धात्वाश्रयाणां च रोगाणां सौषधसङ्ग्रहाणां दशानां च प्राणायतनानां यं चवक्ष्याम्यर्थदशमहामूलीये त्रिंशतमाध्याये तत्र च कृत्स्नस्य तन्त्रोददेशलक्षणस्य तन्त्रस्य चग्रहणधारणविज्ञानप्रयोगकर्मकार्यकालकर्तृकरणकशलाः, कशलाश्च स्मृतिमतिशास्त्रयुक्तिज्ञानस्यात्मनःशीलगणैरविस्वादनेन चै सम्पादनेन सर्वप्राणिषु चेतसो मैत्रस्य मातापितृभातृबन्धुवत्, एवंयुक्ता भवन्त्यग्निवेश!प्राणानामभिसरा हन्तारो रोगाणामिति॥७॥

ēvarṁvādinam bhagavantamātrēyamagnivēśa uvāca- bhagavaṁstē  
kathamasmābhīrvēditavyā bhavēyuriti||6|| bhagavānuvāca- ya imē kulīnāḥ  
paryavadātaśrutāḥ paridṛṣṭakarmāṇō dakṣāḥ śucayo jitahastā  
jītātmānaḥsarvōpakaraṇavantaḥ sarvēndriyōpapannāḥ prakṛtijñāḥ pratipattijñāśca tē  
jñeyāḥ prāṇānāmabhisarā hantārōrōgāṇāṁ; tathāvidhā hi kēvalē śarīrajñānē  
śarīrbhīnirvṛttijñānē prakṛtivikārajñānē ca  
niḥsamśayāḥ,sukhasādhyakrcchrasādhyayāpyapratyākhyeyānāṁ ca  
rōgāṇāṁsamutthānapūrvarūpaliṅgavēdanōpaśayaviśeṣajñānē vyapagatasandēhāḥ,  
trividhasyāyurvēdasūtrasyasasaṅgrahavyākaraṇasya satrividhauṣadagrāmasya  
pravaktārah , pañcātriṁśatō mūlaphalānāṁ caturñāṁ casnēhānāṁ pañcānāṁ ca  
lavaṇānāmaṣṭānāṁ ca mūtrānāmaṣṭānāṁ ca kṣīrāṇāṁ kṣīratvagvṛkṣāṇāṁ ca  
śaṇṇāṁśirōvirēcanādēśca pañcakarmāśrayasyauṣadhaṇasyāśtāvirīśatēśca  
yavāgūnāṁdvātrimśataścūrṇapradēhānāṁ ṣaṇṇāṁ ca virēcanaśatānāṁ pañcānāṁ ca  
kaṣāyaśatānāṁ  
prayōktārah,svasthavṛttavīhitabhōjanapānaniyamasthānacaṅkramaṇaśayanāsanamātrā  
dravyāñjanadhūmanāvanābhyañjana-parimārjanavēgāvidhāraṇavidhāraṇavyāyāmasāt  
myēndriyaparīkṣōpakramāṇasadvīttakuśalāḥ ,catuṣpādōpagṛhītē ca bhēṣajē  
śōḍāśakalē saviniścayē satrīparyēṣāṇē savātakalākalajñānē  
vyapagatasandēhāḥ,caturvidhasya ca snēhasya  
caturvīṁśatuyupanayasyōpakalpanīyasya catuhṣaṣṭīparyantasya cavyavasthāpayitārah,  
bahuvidhavidhānayuktānāṁ ca snēhyasvēdyavamyavirēcyavividhauṣadhpacārāṇāṁ  
cakuśalāḥ, śirōrōgādērdōṣāṁśavikalpajasya ca vyādhisaṅgrahasya  
sakṣayapiḍakāvidradhēstrayāṇāṁ ca  
śōphānāṁbahuvidhaśōphānubandhānāmaṣṭācatvārimśataśca rōgādhikaraṇānāṁ  
catvārimśaduttarasya ca nānātmajasyavyādhiśatasya tathā vīgarhītāsthūlātīkṛśānāṁ  
sahētulakṣaṇōpakramāṇāṁ svapnasya cahitāhitasyāsvapnātisvapnasya ca  
sahētūpakramasya ṣaṇṇāṁ ca  
laṅghanādīnāmupakramāṇāṁsantarpaṇāpatarpaṇajānāṁ ca rōgāṇāṁ  
sarūpapraśamanānāṁ śōṇitajānāṁ ca vyādhīnāṁmadamūrcchāyasannyāsānāṁ ca  
sakāraṇarūpauṣadhpacārāṇāṁ kuśalāḥ, kuśalāścāhāravidhiviniścayasyaprakṛtyā  
hitāhitānāmāhāravikārāṇāmagryasyaṅgrahasyāsāvānāṁ ca  
caturaśītēdravyaguṇakarmaviniścayasyarasānurasasāmśrayasya  
savikalpavairōdhikasya dvādaśavargāśrayasya cānnapānasya  
saguṇaprabhāvayasānupānaguṇasya navavidhasyārthasaṅgrahasyāhāragatēśca  
hitāhitōpayōgaviśeṣātmakasya caśubhāśubhaviśeṣasya dhātvāśrayāṇāṁ ca rōgāṇāṁ  
sauṣadhasaṅgrahāṇāṁ daśānāṁ ca prāṇyatanānāṁ yam  
cavakṣyāmyarthēdaśamahāmūlīyē trimśattamādhyāyē tatra ca kṛtsnasya  
tantrōddēśalakṣaṇasya tantrasya  
cagrahaṇadhāraṇavijñānaprayōgakarmakāryakālakartṛkarāṇakuśalāḥ ,  
kuśalāścasmiṁtimatiśāstrayuktijñānasyātmanaḥ śīlaguṇairavavisamvādanēna ca  
sampādanēna sarvaprāṇiṣu cētasō maitrasyamātāpitṛbhrātṛbandhuvat, ēvarṇyuktā  
bhavantyagnivēśa! prāṇānāmabhisarā hantārō rōgāṇāmiti||7||

evaMvAdinaM bhagavantamAtreyamagnivesha uvAca- bhagavaMste  
kathamasmAbhirveditavyA bhavyuriti||6||

bhagavAnuvAca- ya ime kulinAH paryavadAtashrutAH paridRuShTakarmANo dakShAH  
shucayo jitahastA jitAtmAnaHsarpakaraNavantaH sarvendriyopapannAH  
prakRutij~jAH pratipattij~jAshca te j~jeyAH prANAnAmabhisarA hantArorogANAM;  
tathAvidhA hi kevale sharIraj~jAne sharIraBhiniryRuttij~jAne prakRutivikAraj~jAne ca  
niHsaMshayAH,sukhasAdhyakRucchrasAdhyayApyapratyAkhyeyAnAM ca  
rogANAMSamutthAnapUrvanUpali<sub>ggavedanopashayavisheshaj</sub>Ane vyapagatasandehAH,  
trividhasyAyurvedasUtrasyasasa~ggrahavyAkaraNasya satrividhauShadagrAmasya  
pravaktAraH , pa~jcatriMshato mUlaphalAnAM caturNAM casnehAnAM pa~jcAnAM ca  
lavaNAnAmaShTAnAM ca mUtrANAmaShTAnAM ca kShIrANAM  
kShIravagvRukShANAM caShaNNAM shirovirecanAdeshca  
pa~jcakarmAshrayasyauShadhagaNasyAShTAviMshateshca  
yavAgUnAMdvAtriMshatashcUrNapradehAnAM ShaNNAM ca virecanashatAnAM  
pa~jcAnAM ca kaShAyashatAnAM  
prayuktAraH,svasthavRuttavihitabhojanapAnaniyamasthAnaca<sub>gkramaNashayanAsanamAtrAdravyA</sub>jja  
nadhuManAvanAbhya~jjana-parimArjanavegAvidhAraNavidhAraNavyAyAmasAtmyendr  
iyaparlkShopakramaNasadvRuttakushalAH ,catuShpAdopagRuhlt ca bheShaje  
ShoDashakale savinischcaye satriparyeShaNe  
savAtakAlAkala~jAnevyapagatasandehAH, caturvidhasya ca snehasya  
caturviMshatyupanayasyopakalpanlyasya catuHShaShTiparyantasya ca  
vyavasthApayitAraH, bahuvidhavidhAnayuktAnAM ca  
snehyasvedyavamyavirecyavividhauShadhopacArANAM cakushalAH,  
shirorogAderdoShAMshavikalpjasya ca vyAdhis~ggrahasya  
sakShayapiDakAvidradhestrayANAM cashophAnAM  
bahuvidhashophAnubandhAnAmaShTacatvAriMshatashca rogAdhikaraNAnAM  
catvAriMshaduttarasya canAnAtmajasya vyAdhishatasya tatha  
vigarhitAtisthUIAtikRushAnAM sahetulakShaNopakramANAM svapnasya  
cahitAhitasvapnAtisvapnasya ca sahetUpakramasya ShaNNAM ca  
la~gghanAdInAmupakramANAMSantarpaNApatarpaNajAnAM ca rogANAM  
sarUpaprashamanAnAM shoNitajAnAM ca vyAdhInAMmadamUrcchAyasannyAsAnAM  
ca sakAraNarUpauShadhopacArANAM kushalAH,  
kushalAshcAhAravidhiviniscayasyaprakRutyA  
hitAhitAnAmAhAravikArANAmagryasa~ggrahasyAsavAnAM ca  
caturashIterdravyaguNakarmaviniscayasyarasAnurasasaMshrayasya  
savikalpavairodhikasya dvAdashavargAshrayasya cAnnapAnasya  
saguNaprabhAvasyasAnupAnaguNasya navavidhasyArthasa~ggrahasyAhAragateshca  
hitAhitopayogavisheshAtmakasya cashubhAshubhavisheShasya dhAtvAshrayANAM ca  
rogANAM sauShadhasa~ggrahANAM dashAnAM ca prANAYatanAnAMyAM ca  
vakShyAmyarthedashamahAmUllie triMshattamAdhyAye tatra ca kRutsnasya  
tantroddeShalakShaNasya tantrasyaca  
graNaDhAraNavij~jAnaprayogakarmakAryakAlakartRukaraNakushalAH,  
kushalAshcasmRutimatishAstrayuktij~jAnasyAtmanaH shillaguNairavisaMvAdanena ca  
sampAdanena sarvaprANiShu cetaso maitrasyamAtApitRubhrAtRubandhuvat,  
evaMyuktA bhavantyagnivesha! prANAnAmabhisarA hantAro rogANAmiti||7||

Hearing this statement from Lord Atreya, Agnivesha enquires, "O! Lord! How can we identify them?

Then the Lord spoke -

The one who is of eminent descent, reputed for skills in science and art of medicine, with adequate practical exposure, intelligent, adept, thinking benevolently, clean, who is in full control of his hands and able to perform therapeutic maneuvers, extremely skilled with his hands, having control over himself and the senses, possessing all necessary tools, possessing all sense organs, having adequate knowledge about the normal functions of the human body, and the ability to act as the situation demands. Besides these, a *pranabhisara* should possess the following skills:

- Indisputable knowledge about the following:
  - Knowledge of the human body, knowledge of the growth and development of the human body, knowledge of the physiological and pathological states of the human being;
- Clear knowledge without any doubts regarding:
  - Diseases that are easily curable, curable with difficulty, managed by palliative care and incurable diseases to be treated only after informing about the consequences
- Specific knowledge of etiology, prodromal symptoms, signs and symptoms and response to treatments for effective disease management
- The ability to explain:
  - The threefold essence of Ayurveda in the form of etiology, symptomatology, and treatments in both concise and elaborate manner
  - The threefold treatment in the form of rational, religious and spiritual interventions.
- Ability to clinically administer the thirty-five types of roots and fruits, four types of fats, five types of salts, eight types of urine, eight types of milk and lacticiferous bark trees, six categories of medicines helpful in the five procedures like nasal errhines for cranial purge, twenty-eight types of medicated gruel, the thirty types of ointment powders, the five hundred herbs for decoctions.
- Having practical knowledge of foods, drinks, dietary rules, guidelines for standing, walking, sleeping, sitting, quantity, properties of substances, eye salve, medicated smoking, nasal medication, oil application, massage, attending to the natural urges, being in control of the emotional urges, exercise, habituations, the examination and regulation of sensory and motor organs and good conduct.
- Having doubtless knowledge of treatment comprising of four aspects (of healthcare) and sixteen qualities, diagnosis, the three pursuits of life, wealth and afterlife, the minute qualities of vata and the other two dosha,
- Having the ability to compute and fix the four types of fats, their combinations ranging from twenty-four to sixty-four,

- Expertise in the multifaceted application of the various medicinal formulations for oleation, fomentation, emesis and purgation.
- Expertise in the knowledge of etiology, symptomatology and treatment of the group of diseases beginning with those afflicting the head, including, wasting, skin eruptions, abscess, the three types of edema and the various diseases that develop as a sequel to it numbering forty-eight, the forty diseases mentioned after that, the diseases caused by the dosha exclusively, numbering one hundred and the group of despicable individuals who are extremely obese or thin and so on.
- Expertise in the knowledge of sleep, what is wholesome and unwholesome of sleep, the causes and treatment of insomnia and excessive sleep, the six treatment protocols beginning with depletion and so on, the diseases caused by hyper nutrition and hyponutrition, with knowledge of symptomatology and treatments, along with diseases of the blood and intoxication, fainting and coma with knowledge of etiology, symptomatology and treatment.
- Expertise in prescribing the dietary regimens, the knowledge about the natural properties of food substances in terms of their wholesomeness and unwholesomeness as well the various food preparations, the items that are foremost in their respective domains of use, the eighty-four types of fermented preparations, the skill to determine the properties and pharmacological actions of substances, the various permutations and combinations of tastes and aftertastes of substances, the properties and utility of the foods and drinks described in twelve groups, the properties of the after drinks, the properties of the nine different parts of the various parts of the food sources, the fate of the various types of food that is consumed, the desirable and undesirable outcomes related to its wholesome and unwholesome use, the diseases that are seated in the tissues of the structural supports of the body along with the full array of medications, the ten principal seats of the life processes, and what will be explained further in the thirtieth chapter on the ten great vessels that emanate from the heart, the topics and definitions elaborated in the text, ability to grasp, retain, understand the meaning, practice, implement various treatment procedures, achieve the goal of balance of the body elements, understanding the right opportunity for treatment, skill as a physician, knowledge of the medicines, and
- (endowed with) memory, technical intelligence, applied knowledge of the sciences, being of good conduct, not contradicting oneself and acquiring thereby the mental friendship of all living beings like the relationship with one's mother, father, kith, and kin.

These are the characteristics, O Agnivesha, of the companions of the life forces, and the eliminators of diseases. [7]

## Characteristics of *rogabhisara* (who creates diseases and destroys life forces)

अतो विपरीता रोगाणामभिसरा हन्तारः प्राणानां, भिषक्छदमप्रतिच्छन्नाः कण्टकभूता लोकस्य प्रतिरूपकसधर्माणो राजांप्रमादाच्चरन्ति राष्ट्राणि॥८॥

तेषामिदं विशेषविजानं भवति- अत्यर्थं वैद्यवेशेन श्लाघमाना विशिखान्तरमनचरन्ति कर्मलोभात् श्रुत्वा चकस्यचिदात्यर्थमभितः परिपतन्ति, संश्वरणे चास्यात्मनो वैद्यगुणानुच्छैर्वदन्ति, यश्चास्य वैद्यः प्रतिकर्म करोते तस्य चदोषान्मुहुर्मुहुरुदाहरन्ति, आतुरमित्राणि च प्रहर्षणोपजापोपसेवादिभिरुच्छन्त्यात्मीकर्तुं, स्वल्पेच्छुतां चात्मनः ख्यापयन्ति, कर्म चासाद्य मुहुर्मुहरवलोकयन्ति दाक्ष्येणाजानमात्मनः प्रच्छादयितुकामाः, व्याधिं चोपावर्त्तयितमशक्नुवतोव्याधितमेवानुपकरणमपरिचारकमनात्मवन्तमपदिशन्ति , अन्तगतं चैनमभिसमीक्ष्यान्यमाश्रयन्ति देशमपदेशमात्मनःकृत्वा, प्राकृतजनसन्निपाते चात्मनः कौशलमकशलवद्वर्णयन्ति, अधीरवच्च धैर्यमपवदन्ति धीराणां, विद्वज्जनसन्निपातं(चाभिसमीक्ष्य) प्रतिभयमिव कान्तारमध्वगः परिहरन्ति दूरात्, यश्चैषां कश्चित् सूत्रावयवो अवत्युपयुक्तस्तमप्रकृतेप्रकृतान्तरे वा सततमुदाहरन्ति, न चानुयोगमिच्छन्त्यनुयोक्तुं वा, मृत्योरिव चानुयोगादुद्विजन्ते, न चैषामाचार्यः शिष्यः सब्रह्मचारी वैवादिको वा कश्चित् प्रजायत इति॥९॥

atō viparītā rōgānāmabhisarā hantārah prāṇānāṁ, bhiṣakchadmapraticchannāḥ  
kanṭakabhūtā lōkasyapratirūpakaśadharmaṁ rājñāṁ pramādāccaranti rāṣṭrāṇi॥८॥

tēśāmidāṁ viśeṣavijñānāṁ bhavati- atyarthāṁ vaidyavēśēna ślāghamānā  
viśikhāntaramanucarantikarmalōbhāt, śrutvā ca kasyacidāturyamabhitāḥ paripatanti,  
saṁśravanē cāsyātmanōvaidyaguṇānuuccairvadanti, yaścāsya vaidyāḥ pratikarma karōti  
tasya ca dōśānmuhurmuhurudāharanti, āturamitrāṇi ca  
praharṣaṇōpajāpōpasēvādibhiricchantyātmīkartum, svalpēcchutāṁ cātmanāḥ  
khyāpayanti,karma cāsādya muhurmuhuravalōkayanti dākṣyēṇājñānamātmanāḥ  
pracchādayitukāmāḥ, vyādhīmcāpāvartayitumaśaknuvatō  
vyādhitamēvānupakaraṇamaparicārakamanātmaवानुपादिशांति ,antagataरां  
cainamabhisamīkṣyānyamāśrayanti dēśamapadēśamātmanāḥ kṛtvā,  
prākṛtajanasannipātēcātmanāḥ kauśalamakuśalavadvarṇayanti, adhīravacca  
dhairyamapavadanti dhīrānāṁ,vidvajjanasannipātām (cābhisamīkṣya) pratibhayamiva  
kāntāramadhvagāḥ parihaṇanti dūrāt, yaścaiśāṁkaścit sūtrāvayavō  
bhavatyupayuktastamaprakṛtē prakṛtāntarē vā satatamudāharanti,  
nacānuyōgamicchantyanuyōktum vā, mṛtyōriva cānuyōgādudvijantē, na caīśāmācāryāḥ  
śiṣyāḥ sabrahmacārīvaivādikō vā kaścit prajñāyata iti॥९॥

ato viparItA rogANAmabhisarA hantAraH prANAnAM, bhiShakchadmapraticchannAH  
kaNTakabhUtAlokasya pratirUpakasadharmaNo rAj~jAM pramAdAccaranti  
rAShTrANIi॥८॥

teShAmidaM visheShavij~jAnaM bhavati- atyarthāM vaidyaveshena  
shlAghamAnAvishikhAntaramanucaranti karmalobhAt, shrutvA ca  
kasyacidAturyamabhitāH paripatanti, saMshravaNecAsyAtmano  
vaidyaguNAnuuccairvadanti, yashcAsya vaidyāH pratikarma karoti tasya  
cadoShAnmuhurmuhurudAharanti, AturamitrANI ca

praharShaNopajApopasevAdibhiricchantzAtmIkartuM,svalpecchutAM cAtmanaH  
 khyApayanti, karma cAsAdya muhurmuhuravalokayantidAkShyeNAj~jAnamAtmanaH  
 pracchAdayitukAmAH, vyAdhiM  
 cApAvartayitumashaknuvatovyAdhitamevAnupakaraNamaparicArakamanAtmavantamu  
 padishanti [2] , antagataMcainamabhisamlkShyAnyamAshrayanti  
 deshamapadeshamAtmanaH kRutvA, prAkRutajanasannipAtecAtmanaH  
 kaushalamakushalavadvarNayanti, adhlrvacca dhairyamapavadanti  
 dhlrANAM,vidvajjanasannipAtaM (cAbhisamlkShya) pratibhayamiva  
 kAntAramadhvagAH pariharanti dUrAt,yashcaiShAM kashcit sUtrAvayavo  
 bhavatyupayuktastamaprakRute prakRutAntare vA satatamudAharanti,na  
 cAnuyogamicchantyanuyoktuM vA, mRutyoriva cAnuyogAdudvijante, na  
 caiShAmAcAryaH shiShyaHsabrahmacArl vaivAdiko vA kashcit praj~jAyata iti||9||

Contrary to this are the companions of disease, the killers of the life process, wearing the mask of a physician like a charlatan roams the country owing to the oversight of the King.

The specific characteristics of such people are given below -

Prompted by the greed to find a vocation for themselves, these persons make self-boosting claims about their medical skills and engage in some clinical practice. When they hear that someone is sick, they present themselves and make themselves heard, announcing their qualities as a physician in loud voices. They also make it a point to repeatedly highlight the faults of the physician who retaliates or becomes a competition for them. They try to befriend the associates and friends of the patients by making them happy, praising them and also serving them. They also emphasize that they expect very little for the services rendered. When they are confronted with a situation in which they have to function as a physician, they look here and there frantically trying to cover up their ignorance. Being unable to manage the disease, they blame the patient by saying that they do not have the necessary tools, or do not have assistants or are not disciplined. When the patient shows sign of succumbing to the disease, they relocate to another place excusing themselves. Amongst the common people, they brag about their skills in a contradictory manner revealing their lack of skills, exposing themselves as cowards, they downgrade the courage of the valiant persons. But when they see knowledgeable people, they move out of their way to avoid a confrontation just as wayfarers avoid thick forests out of fear. Whatever concepts they know, they constantly refer to them in inappropriate or altogether different contexts. They are fearful of any questions. They fear questions like death. Moreover, it is not possible to get any information about their teachers, disciples or colleagues or if mentioned, it is controversial. [8-9]

## Social hazards from quackery

भवन्ति चात्र- भिषक्छद्म प्रविश्यैवं व्याधितांस्तर्कयन्ति ये। वीतंसमिव संश्रित्य वने शाकुन्तिका  
 द्विजान्॥१०॥

श्रुतदृष्टक्रियाकालमात्राज्ञानबहिष्कृताः। वर्जनीया हि ते मृत्योश्चरन्त्यनुचरा भूवि॥११॥

वृतिहेतोर्भिषडमानपूर्णान् मूर्खविशारदान्। वर्जयेदानुरो विद्वान् सर्पास्ते पीतमारुताः॥१२॥

ये तु शास्त्रविदो दक्षाः शुचयः कर्मकोविदाः। जितहस्ता जितात्मानस्तेभ्यो नित्यं कृतं नमः॥१३॥

bhavanti cātra- bhiṣakchadma praviśyaivam vyādhitāṁstarkayanti yē| vītar̄samiva  
saṁśritya vanē śākuntikā dvijān॥10॥

śrutadr̄ṣṭakriyākālamātrājñānabahiskṛtāḥ| varjanīyā hi tē mṛtyoścarantyanucarā<sup>1</sup>  
bhuvi॥11॥

vṛttihētōrbhiṣaṁmānapūrṇān mūrkhaśāradān| varjayēdāturō vidvān sarpāstē  
pītamārutāḥ॥12॥

yē tu śāstravidō dakṣāḥ śucayah karmakōvidāḥ| jitahastā jitātmānastēbhyō nityam  
kṛtam namah॥13॥

bhavanti cAtra- bhiShakchadma pravishyaivaM vyAdhitAMstarkayanti ye| vItaMsamiva  
saMshritya vane shAkuntikA dvijAn॥10॥

shrutadRuShTakriyAkAlamAtrAj~jAnabahiShkRutAH| varjanlyA hi te  
mRutyoshcarantyanucarA bhuvi॥11॥

vRuttihetorbhiSha~gmAnapUrNAn mUrkhavishAradAn| varjayedAturo vidvAn sarpAste  
pItamArutAH॥12॥

ye tu shAstravido dakShAH shucayaH karmakovidAH| jitahastA jitAtmAnastebhyo  
nityaM kRutaM namaH॥13॥

It has also been said -

Having adorned the mask of a physician, they move about trying to trap patients like  
bird catchers moving in the forests with cages in their hands.

Devoid of the knowledge of the text, practices, timing and dosage, these people should  
be avoided at all costs as they move along with death itself.

The patient should avoid such impostors posing themselves as physicians for the sake  
of livelihood, who are verily fools appearing as learned. They are like snakes who have  
drunk air and are starving for prey.

Eternal salutations to those physicians who are well versed in the texts, who are adept,  
pure and well versed in practice, who have complete control over their hands in  
performing skilled treatments and those who have self-control. [10-13]

## Summary

तत्र ६लोकः- दशप्राणायतनिके ६लोकस्थानार्थसङ्ग्रहः। द्विविधा भिषजश्चोक्ताः प्राणस्यायतनानि  
च॥१४॥

tatra ślōkaḥ- daśaprāṇāyatanikē ślōkasthānārthasaṅgrahaḥ| dvividhā bhiṣajaścōktāḥ  
prāṇasyāyatanāni ca॥14॥

tatra shlokaH- dashaprANAyatanike shlokasthAnArthasa~ggrahaH| dvividhA bhiShajashcoktAH prANasyAyatanAni ca||14||

The summarizing verses -

In the chapter titled “the ten seats of the life forces,” the summary of the contents of the Sutra Sthana or *Shloka Sthana*, the two types of physicians and the ten seats of the life forces have been described. [14]

## Tattva Vimarsha (Fundamental Principles)

- The ten principal seats of life forces are the two temples, the three vital organs (heart, brain and urinary bladder including urinary system), the throat, rakta dhatu (blood), Shukra dhatu (reproductive fluid), Oja (the vital fluid) and the anus.
- The physician who is the companion of life forces shall know these as well as the sensory and motor organs, intelligence, the cause of consciousness as well as diseases.
- *Pranabhisara vaidya* having the enlisted qualities is the best physician who can protect the life forces. On the contrary, *Rogabhisara* destroys the life forces.

## Vidhi Vimarsha (Applied Inferences)

### Source of knowledge

The author makes it clear at the beginning of each chapter that it is not essentially his views that are being codified but rather the views of the preceptor Atreya. The teaching becomes credible when it comes from an authentic source. When codified knowledge is transmitted, it is mandatory to reveal the source of information and also to confirm its authenticity. [2]

### Concepts of importance of prana

It is a fundamental principle in Ayurveda that any medical intervention should not work against the prana of the individual as it can lead to a decrease in the quality of life, new diseases, reduction in life span or even death. When depletive therapies are done, it has been specified that it should not be antagonistic to the factors that support life - *pranavirodhina chainam langhanenopapadayet*. Thus, the knowledge of the seats of *prana* and the impact of treatments, injuries and other stresses on them is of utmost practical relevance to the physician. Any affliction to the seats of the life forces needs to be attended to promptly. Treatments succeed only when two factors are managed in the background. One is *prana*, and the other is *bala*. The text says that life is dependent on *prana* and strength is dependent on *udana* - *visheshat jivitam prane udano balamuchyate* (the life is seated in *prana*, while the strength in *udana*).

In the Charak Samhita, it is mentioned in the Trimarmiya Siddhi that the *mahamarmas* should be protected with utmost vigilance. The protection of the *mahamarmas* which are the brain, heart, and bladder is known as *mahamarmaparipalana*. A thorough knowledge of the seats of the life force, as well as the interventions to protect them,

enables the physician to protect the life and strength of the patient, without which, no treatment will succeed.

The entire body is the seat of the life forces. However, the ten seats described here are of utmost importance. It is not difficult to understand why these ten locations are considered to be the special seats of the life forces.

### **Shankha (temples)**

Epidural space, the outermost part of the spinal canal, houses the middle meningeal artery that serves to provide steady blood supply to the meninges. This region is covered by a very thin layer of skull which is also very weak in comparison to the rest of the skull. Any laceration of the middle meningeal artery – due to a trauma or blow to this region – could lead to blood pooling in the epidural space, and consequently, building up of pressure on brain tissues, causing an eventual death of brain cells due to oxygen deprivation.

### **Three marma**

The depiction of the three vital organs viz., brain, heart, and bladder as the seats of the life force do not need much explanation. These organs are known as the *trimarmas*, and entire chapters have been devoted to these three vital *marmas* in the section on treatments (Chikitsa Sthana) and clinical success (Siddhi Sthana) explaining the various diseases that afflict these organs and how to manage them. *Trimarma* corresponds to the biomedical concept of the tripods of life, which are the brain, heart, and lungs. In Ayurveda, instead of lungs, the bladder including the kidneys constitutes one of the three vital organs that sustain life.

### **Kantha (throat)**

The word *kantha* means throat and also the neck. The throat is important because it is the common passage for food and air and choking can lead to asphyxiation and death. Apart from that, it is also the location of the voice box. If we extend the meaning to include the neck, then there are important blood vessels that connect to the head. The external carotid artery, the jugular vein, and vertebral arteries can suffer injuries leading to life-threatening situations. Injuries to the thoracic inlet are associated with high mortality.

### **Rakta (blood)**

The blood is no doubt synonymous with life itself. So much so that Ayurveda refers to bleeding as *jivadana* or taking away life. It is mentioned in the chapter called Vidhishonitiya that the life forces follow the blood. Qualitative and quantitative parameters of blood need to be maintained for life to be sustained.

## Shukra (reproductive potency)

Shukra, which is loosely translated as the semen, actually represents the potency of reproduction and renewal. It is concerned with the ability of life to renew itself, which is a challenge at the cellular level as well as the level of the organism. Life ceases to continue if it cannot renew itself. For this reason, the shukra is considered to be the seat of the life force.

## Ojas

Ojas is related to immunity and is a function that manifests when all the tissues and elements of the body are optimized for structural and functional integrity. Ojas is not one substance but a network of substances and functions that expresses as the innate immunity of the organism. It goes without words that an immune system is an essential tool for survival and adaptation. Coping with stress and life-threatening situations require a robust immune system, and therefore ojas is one of the prominent seats of the life forces.

## Guda (anus)

Guda denotes the anus and also the rectum as such. Rectal injuries result from a variety of insults and cause a heterogeneous spectrum of injuries to patients. Historically, many of these injuries were devastating, with high morbidity and mortality. They often required an aggressive approach to treatment including fecal stream diversion, distal rectal washout, and presacral drainage. Contemporary surgical care and a better understanding of the management of these injuries have dramatically improved outcomes. Even a digital rectal examination can sometimes induce fainting by activating the vasovagal reflex.

## Indriya

After listing the ten seats of the life force, the text enumerates the sensory and motor organs which are the primary tools with which the body becomes aware of the external environment and makes adaptive responses. These are called as the indriya and much of their activities to ensure survival are autonomous. Vijnana represents the higher awareness which leads the individual to respond and adapt voluntarily to external stimuli. Atman is the experiencing self that witnesses the changing self and non-self that is experienced. The disease manifests when the organism fails to adapt to situations in the effort to preserve the life process. The genuine physician is one who has a deep insight into this process. [3-4]

## Types of vaidya and medical ethics

Two types of vaidya (doctors) viz. one who preserves and protects life forces and destroyer of diseases, and the other who produces diseases and destroyer of the life process are observed in the society. [5]

Characteristics and medical ethics for a doctor to protect the health of patients are described in details. The principles of good clinical practices are observed in this description. [6-7]

The characteristics of a bad doctor are described in detail. This also suggests forbidden things to be avoided by good doctors. It also gives a lesson to the society that which doctors they should avoid. [8-9]

## Related chapters

Deerghanjiviteeya Adhyaya, Khuddakachatushpada Adhyaya, Sharira Sankhya Sharira Adhyaya, Trimarmiya Chikitsa Adhyaya, Trimarmiya Siddhi Adhyaya

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## Arthedashmahamooliya Adhyaya

### Sutra Sthana Chapter 30. The Ten great vessels arising from Heart and aspects of healthy life Abstract

The last chapter emphasizes some of the fundamental principles of life, health and disease. The chapter begins with a description of the heart and ten great vessels attached to it and talks about several aspects of vital importance such as sira, dhamani, srotas, ojas, etc. The salient features of good Ayurvedic practitioner, complete definition of Ayu and Ayurveda are provided in this chapter. The specific characteristics of quality of life are described in this chapter under the heading of hitayu(beneficial life). Further non-beneficial, happy and unhappy kinds of life have also been described in the chapter. The most important objective of Ayurveda about preservation of health of the healthy and pacification of diseases in the patients is highlighted in this chapter. The structure of treatise, its sections, means to study and understand are narrated. At last, a comprehensive list of all chapters in this entire treatise has been provided.

**Keywords:** Hridaya, ojas, sira, dhamani, srotas, channels of transportation and transformation, vessels, heart, vitality, classification of Ayu, Ayurveda, Indian system of medicine, quality of life, lifespan, medical education, specialties of Ayurveda.

## Introduction

*Mahat* and *artha* are two synonyms that indicate hridaya (heart), used in this context exclusively in the literature related to medical science and not elsewhere. After the description of hridaya and the ten great vessels that originate there and elaborating further on ojas, sira, dhamani, srotas,etc., it further describes Ayu and the difference between happy, unhappy, beneficial, and non-beneficial kinds of life. These were briefly mentioned in the first chapter, but here these have been elaborated. The estimation of the lifespan of an individual when unexpected signs and symptoms appear and the role of self-realization and nonviolence in enhancing the longevity of life has been elaborated. Questions like 'Why is Ayurveda eternal?' have been taken up in this chapter. Since this is the last chapter of the Sutra Sthana, it also provides an extensive 'Table of Contents' of the entire text including an elaborate explanation of the sequence of chapters.

## Sanskrit text, transliteration and english translation

अर्थदशमहामूलीयाध्यायोपक्रमः अथातोऽर्थदशमहामूलीयमध्यायं व्याख्यास्यामः||१||

इति ह स्माह भगवानात्रेयः||२||

athātō'rthēdaśamahāmūlīyamadhyāyāṁ vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAto~arthedashamahAmUllyamadhyAyaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Arthedashmahamooliya” (Ten great vessels arising from Heart and aspects of healthy life). Thus said Lord Atreya. [1-2]

### Importance of Hridaya (heart)

अर्थे दश महामूलाः समासक्ता महाफलाः। महच्चार्थश्च हृदयं पर्यायैरुच्यते ब्रुधैः॥३॥

षड्ङगमङ्गं विज्ञानमिन्द्रियाण्यर्थपञ्चकम्। आत्मा च सगुणश्चेतशिचन्त्यं च हृदि संश्रितम्॥४॥

arthē daśa mahāmūlāḥ samāsaktā mahāphalāḥ। mahaccārthaśca hṛdayam  
paryāyairucyatē budhaiḥ॥3॥

शादांगमांगाम् विज्ञानमिन्द्रियाण्यर्थपञ्चकम्। आत्मा च सगुणाश्चेताश्चिन्त्याम् चा  
हृदि संश्रितम्॥4॥

arthe dasha mahAmUIAH samAsaktA mahAphalAH| mahaccArthashca hRudayaM  
paryAyairucyate budhaiH||3||

ShaDa<sub>ggama</sub>ggaM vij<sub>jAnamindriyANyarthapa</sub>jcakam| AtmA ca saguNashcetashcintyaM ca hRudi  
saMshritam||4||

Ten great vessels originate in the heart and are considered very important. The synonyms of the ‘heart’ as given by the scholars are mahat, artha and hridaya. *Shadanga* (six divisions of the body, i.e., four limbs, head, and torso), internal organs, consciousness, motor and sensory organs, five objects of sensory perceptions, and the soul (along with its attributes such as joy, etc.), mind and objects of the mind - are all located in the heart (i.e., are dependent on the functioning of the heart). [3-4]

प्रतिष्ठार्थं हि भावानामेषां हृदयमिष्यते। गोपानसीनामागारकर्णिकेवार्थचिन्तकैः॥५॥

तस्योपघातान्मूर्च्छायां भेदान्मरणमूर्च्छति।६।

pratiṣṭhārtham hi bhāvānāmēṣāṁ hṛdayamisyatē|  
gopānasīnāmāgārakarṇikēvārthacintakaiḥ॥5॥

tasyōpaghātānmūrcchāyām bhēdānmaranānamūrcchati|6|

pratiShThArthaM hi bhAvAnAmeShAM hRudayamiShyate|  
gopAnasInAmAgArakarNiKEvArthacintakaiH||5||

tasyopaghAtAnmUrcchAyaM bhedAnmaraNamRucchatI|6|

The heart houses the entities mentioned above, just as a central beam supports the framework of a roof. An injury to the heart causes loss of consciousness and rupture causes death. [5-6]

यद्धि तत् स्पर्शविज्ञानं धारि तत्त्र संश्रितम्॥६॥

तत् परस्यौजसः स्थानं तत्र चैतन्यसङ्ग्रहः। हृदयं महदर्थश्च तस्मादुक्तं चिकित्सकैः॥७॥

yaddhi tat sparśavijñānam dhāri tattatra saṁśritam॥६॥

tat parasyaujasah sthānam tatra caitanyasaṅgrahah| hrdayam mahadarthaśca  
tasmāduktam cikitsakaiḥ ||7||

yaddhi tat sparshavij~jAnaM dhAri tattatra saMshritam॥६॥

tat parasyaujasah sthAnaM tatra caitanyasa~ggrahaH| hRudayaM mahadarthashca  
tasmAduktaM cikitsakaiH ||7||

The heart sustains tactile perception, life, and body. That the heart is the supreme location of ojas and the locus of consciousness is the reason why physicians call it hridaya, mahat, or artha". [7]

### The importance of ojas and its seat at heart

तेन मूलेन महता महामूला मता दशः ओजोवहाः शरीरेऽस्मिन् विधम्यन्ते समन्ततः॥८॥

tēna mūlēna mahatā mahāmūlā matā daśā| ūjōvahāḥ śarīrē'smin vidhamyantē  
samantataḥ||8||

tena mUlena mahatA mahAmUIA matA dasha| ojovahAH sharIre~asmin vidhamyante  
samantataH||8||

Arising from the heart are the ten great vessels that carry ojas, pulsating in this body and suffusing thoroughly. [8]

येनौजसा वर्तयन्ति प्रीणिताः सर्वदेहिनः | यद्वते सर्वभूतानां जीवितं नावतिष्ठते॥९॥

यत् सारमादौ गर्भस्य यत्तद्गर्भरसाद्रसः | संवर्तमानं हृदयं समाविशति यत् पुरा ||१०॥

यस्य नाशात् नाशोऽस्ति धारि यद्धृदयाश्रितम् | यच्छरीररसस्नेहः प्राणा यत्र प्रतिष्ठिताः॥११॥

तत्फला बहुधा वा ताः फलन्तीव(ति) महाफलाः॥१२॥

yēnaujasā vartayanti prīṇitāḥ sarvadēhinah | yadṛtē sarvabhūtānām jīvitām  
nāvatiṣṭhatē||9||

yat sāramādau garbhasya yattadgarbharasādrasah | saṁvartamānam hrdayam  
samāviśati yat purā ||10||

yasya nāśāttu nāśo'sti dhāri yaddhṛdayāśritam | yaccharīrarasarasnēhaḥ prāṇā yatra  
pratiṣṭhitāḥ||11||

tatphalā bahudhā vā tāḥ phalantīva(ti) mahāphalāḥ||12||

yenaujasA vartayanti prINitAH sarvadehinaH | yadRute sarvabhUtAnAM jIvitaM  
nAvatiShThatē||9||

yat sAramAdau garbhasya yattadgarbharasAdrasaH | saMvartamAnaM hRudayaM  
samAvishati yat purA ||10||

yasya nAshAttu nAsho~asti dhAri yaddhRudayAshritam | yaccharIrasasnehaH prANA  
yatra pratiShThitAH||11||

tatphalaA bahudhA vA tAH phalantIva(ti) mahAphalAH||12|

It is the ojas, located within the heart, that keeps all the beings content and alive. It is the essence in the fertilization and the essence of rasa in the embryo. It enters the heart during cardiogenesis, and its deficiency or loss leads to degeneration of the body. It is the seat of the essence of unctuous body fluids and vital life forces. Thus, the ojas is supremely important since it results in multiple benefits. [9-12]

### Differentiation in vessels

ध्मानादध्मन्यः सवणात् स्रोतांसि सरणात्सिराः||१२||

dhmānāddhamanyah sravaṇāt srōtāṁsi saraṇātsirāḥ||12||

dhmAnAddhamanyaH sravaNAt srotAMsi saraNAtsirAH||12||

Because of pulsation (*dhma*), some of those (vessels) are called dhamani. Since fluids move out because of pulsation of the heart (*Sravana*, i.e., ebbing out) some of these vessels are called srotas. Some of the vessels carry the contents forward (*sarana*), are called sirah.[12]

तन्महत् ता महामूलास्तच्चोजः परिरक्षता। परिहार्या विशेषेण मनसो दुःखहेतवः॥१३॥

हृदयं यत् स्याद्यदौजस्यं स्रोतसां यत् प्रसादनम्। ततत् सेव्यं प्रयत्नेन प्रशमो ज्ञानमेव च॥१४॥

tanmahat tā mahāmūlāstaccōjah parirakṣatā| pariḥāryā viśeṣēṇa manasō  
duḥkhahētavah||13||

hṛdyam yat syādyadaujasyam srōtasām yat prasādanam| tattat sēvyam prayatnēna  
praśamō jñānamēva ca||14||

tanmahat tA mahAmUIAstaccojaH parirakShatA| pariḥAryA visheSheNa manaso  
duHkhahetavaH||13||

hRudyaM yat syAdyadaujasyaM srotasAM yat prasAdanam| tattat sevyam prayatnena  
prashamo j~jAnameva ca||14||

The heart, the great vessels, and the ojas need to be protected and preserved. To achieve this, one has to avoid causes of mental suffering especially. Diet, drugs, and behavior that are beneficial for the heart, for the formation of ojas and for keeping the vessels clear (or unblocked) should be adopted, along with the pursuit of mental peace and wisdom. [13-14]

## Best factors for life

अथ खल्वेकं प्राणवर्धनानामुत्कृष्टतममेकं बलवर्धनानामेकं बृहणानामेकं नन्दनानामेकं हर्षणानामेकमयनानामिति | तत्राहिंसा प्राणिनां प्राणवर्धनानामुत्कृष्टतमं, वीर्यं बलवर्धनानां, विद्या बृहणानाम्, इन्द्रियजयो नन्दनानां, तत्त्वावबोधोहर्षणानां, ब्रह्मचर्यमयनानामिति; एवमायुर्वेदविदो मन्यन्ते||१५||

atha khalvēkaṁ prāṇavardhanānāmutkṛṣṭatamamēkaṁ balavardhanānāmēkaṁ  
bṛmhāṇānāmēkaṁnandanānāmēkaṁ harṣaṇānāmēkamayanānāmiti | tatrāhiṁsā  
prāṇināṁ prāṇavardhanānāmutkṛṣṭatamaṁ, vīryaṁ balavardhanānāṁ, vidyā  
bṛmhāṇānāṁ,indriyajayō nandanānāṁ, tattvāvabōdhō harṣaṇānāṁ,  
brahmacaryamayanānāmiti; ēvamāyurvēdavidōmanyantē||15||

atha khalvekaM prANavardhanAnAmutkRuShTatamamekaM balavardhanAnAmekaM  
bRuMhaNAnAmekaMnandanAnAmekaM harShaNaNAmekamayanAnAmiti | tatrAhiMsA  
prANinAM prANavardhanAnAmutkRuShTatamaM, vIryaM balavardhanAnAM,  
vidyAbRuMhaNAnAm, indriyajayo nandanAnAM, tattvAvabodho harShaNaNAM,  
brahmacaryamayanAnAmiti;evamAyurvedavido manyante||15||

Isn't there one utmost factor (amongst others) for bestowing longevity, one for improving strength, one which is always to be increased, one among all happiness, one for exaltation/ecstasy and one as a path for self-realization? Yes, there are such factors. Non-violence is the utmost one to bestow longevity of living beings. Valor is the best among promoters of strength. Knowledge is the one which should always be increased. Self-control is the best factor for staying happy. Discovery/understanding/realization is the best one for feeling exalted/ecstatic. And finally, celibacy is the most effective factor in the path for self-realization, as per the view of Ayurvedic scholars. [15]

## Description of Ayurveda

*The method of learning text of Ayurveda*

तत्रायुर्वेदविदस्तन्त्रस्थानाद्यायप्रश्नानां पथक्त्वेन वाक्यशो वाक्यार्थशोऽर्थावयवशश्च प्रवक्तारो  
मन्तव्याः| तत्राह- कथं तन्त्रादीनि वाक्यर्शो वाक्यार्थशोऽर्थावयवशश्चोक्तानि भवन्तीति||१६||

अत्रोच्यते- तन्त्रमार्ष कात्स्नर्येन यथाम्नायमुच्यमानं वाक्यशो भवत्युक्तम्||१७||

बुद्ध्या

सम्यग्नप्रविश्यार्थतत्त्वंवाग्भिर्व्याससमाप्रतिजाहेतदाहरणोपनयनिगमनयक्ताभिस्त्रिविधशिष्यबद्धिग  
म्याभिरुच्यमानं वाक्यार्थशोभवत्युक्तम्||१८|| तन्त्रनियतानामर्थदुर्गाणं पुर्विभावनैरुक्तमर्थावयवेशो  
भवत्युक्तम्||१९||

tatrāyurvēdavidastantrasthānādhyāyapraśnānāṁ pṛthaktvēna vākyasō  
vākyārthaśō'rthāvayaśaścapravaktārō mantavyāḥ| tatrāha- kathāṁ tantrādīni vākyasō  
vākyārthaśō'rthāvayaśaścōktāni bhavantīti||16||

atrōcyatē- tantramārṣam kārtsnyēna yathāmnāyamucyamānaṁ vākyasō  
bhavatyuktam||17||

buddhyā  
samyaganupraviśyārthatattvāṁvāgbhirvyāsaśāmāśapratijñāhētūdāharaṇōpanayanigam  
anayuktābhistrividhaśiyabuddhigamyābhirucyamānāṁ vākyārthaśō bhavatyuktam||18||

tantraniyatānāmarthadurgāṇāṁ punarvibhāvanairuktamarthāvayavaśō  
bhavatyuktam||19||

tatrAyurvedavidastantrasthAnAdhyAyaprashnAnAM pRuthaktvena vAkyasho  
vAkyArthasho~arthAvayavashashcapravaktAro mantavyAH| tatrAha- kathaM tantrAdIni  
vAkyasho vAkyArthasho~arthAvayavashashcoktAni bhavantIti||16||

atrocye- tantramArShaM kArtsnyena yathAmnAyamucyamAnaM vAkyasho  
bhavatyuktam||17||

buddhyA  
samyaganupravishyArthatattvaMvAgbhirvyAsasamAsapratij~jAhetUdAharaNopanayani  
gamanayuktAbhistrividhashiShyabuddhigamyAbhirucyamAnaM vAkyArthasho  
bhavatyuktam||18||

tantraniyatAnAmarthadurgANAM punarvibhAvanairuktamarthAvayavasho  
bhavatyuktam||19||

He can be considered an Ayurveda scholar, who can answer queries regarding the classical text, its sections, chapters and specific topics, precisely. The scholar should be able to quote the lines of the text, interpret them and explain its aspects. So how should this quotation, interpretation, and explanation be done? It should be done as follows: the text of the sages, as expounded by them, should be reproduced as it is - in its full form. After thoroughly comprehending the text, one should be able to explain, elaborately and concisely, and supported by examples or anecdotes, its meaning, presumptions, reasonings, related concepts, and conclusions, in such a manner that it is comprehensible to the three types of students (above average, average and below-average). The text that is complicated to understand, its meaning and its various aspects should be repeated for the attainment of clarity in concepts. [16-19]

#### *Prashnashtak (eight questions)*

तत्र चेत् प्रष्टारः स्युः-चतुर्णामक्सामयजरथर्वेदवेदानां कं वेदमपदिशन्त्यायुर्वेदविदः? किमायुः?  
कस्मादायुर्वेदः? किमर्थमायुर्वेदः? शाश्वतोऽशाश्वतो वा? कौतै कानि चास्याङ्गानि? कैश्चायमध्येतव्यः?  
किमर्थं च? इति||२०||

tatra cēt praṣṭāraḥ syuḥ-caturṇāmṛksāmayajuratharvavēdānāṁ karṇ  
vēdamupadiśantyāyurvēdavidah? kimāyuḥ? kasmādāyurvēdah? kimarthamāyurvēdah?  
śāśvatō'śāśvatō vā? kati kāni cāsyāṅgāni? kaiścāyamadhyētavyah? kimartham ca?  
iti||20||

tatra cet praShTAraH syuH-caturNAmRuksAmayajuratharvavedAnAM  
kaMvedamupadishantyAyurvedavidaH? KimAyuH? kasmAdAyurvedaH?

kimarthatAyurvedaH? shAshvato~ashAshvato vA? kati kAni cAsyA~ggAni?  
kaishcAyamadhyetavyaH? kimarthaM ca? iti||20||

Again, when the questions arise as to which among the four *vedas*—*rk*, *sama*, *yajus* and *atharva*, should scholars of Ayurveda follow? What is *Ayu*? Why is the body of knowledge called Ayurveda? What is the purpose of Ayurveda? Is it eternal or transient? What are its branches and how many are they? Who are eligible to study it and why should it be studied? (An ideal practitioner should be able to answer these questions in the manner mentioned in the following verse) [20]

### *Source of Ayurveda*

तत्र भिषजा पृष्ठेनैवं चतुर्णामूकसामयजरथर्ववेदानामात्मनोऽर्थवेदे भक्तिरादेश्या, वेदो  
ह्याथर्वणोदानस्वस्त्ययनबल्लभङ्गलहोमनियमप्रायश्चित्तोपवासमन्त्रादिपरिग्रहाच्चिकित्सां प्राह;  
चिकित्सा चायुषो हितायोपदिश्यते॥२१॥

tatra bhiṣajā pṛṣṭhenaivam caturṇāmṛksāmaya juratharvavēdānāmātmanō'tharvavēdē  
bhaktirādēśyā, vēdōhyātharvaṇō  
dānasvastyayanabalimaṅgalahōmani yamaprāyaścittōpavāsa mantrādiparigraphāccikitsā  
ṁprāha; cikitsā cāyusō hitāyōpadiśyatē॥२१॥

tatra bhiShajA pRuShTenaivaM  
caturNAmRuksAmayajuratharvavedAnAmAtmano~atharvavedebhaktirAdeshyA, vedo  
hyAtharvaNodAnasvastyayanabalima~ggalahomani yamaprAyashcittopavAsamantrAdip  
arigraphAccikitsAM prAha; cikitsAcAyuSho hitAyopadisyate॥२१॥

Out of the four *veda* – The Rigveda, Yajurvedas, Samaveda, and Atharvaveda. The physicians owe their loyalty to the *Atharva Veda* because this deals with the treatment of diseases by resorting to various practices like sacrifices, prayers, and chants, charity, moral discipline, the atonement of sins, austere practices like fasts, etc. These are advocated for treatment as well as for living a healthy, long life. [21]

### *The meaning of Ayu*

वेदं चोपदिश्यायुर्वाच्यं; तत्रायुश्चेतनानुवृत्तिर्जीवितमनुबन्धो धारि चेत्येकोऽर्थः॥२२॥

vēdām cōpadiśyāyurvācyam; tatrāyuścētanānuvṛttirjīvitamanubandhō dhāri  
cētyēkō'rthah॥२२॥

vedaM copadishyAyurvAcyaM ; tatrAyushcetanAnuvRuttirjlvitamanubandho dhAri  
cetyeko~arthaH॥२२॥

After answering question on *Veda*, *Ayu* is being described. *Ayu* means the *anuvritti* (continuity) of *chetana* (consciousness) i.e., *chetananuvritti*, being alive (*jeevita*), bonding with the body (*anubandha*) and preserving vitality (*dhari*). [22]

## *Scope of Ayurveda*

तदायुर्वेदयतीत्यायुर्वेदः; कथमिति चेत्? उच्यते-स्वलक्षणतः सखासखतो हिताहिततः  
प्रमाणाप्रमाणतश्च; यतश्चायुष्याण्यनायुष्याणि च द्रव्यगुणकर्मौणि वैदयत्यतोऽप्यायुर्वेदः।  
तत्रायुष्याण्यनायुष्याणि च द्रव्यगुणकर्मौणि केवलेनोपदेक्ष्यन्ते तन्त्रेण॥२३॥

tadāyurvēdayatītyāyurvēdah; kathamiti cēt? ucyatē-svalakṣaṇataḥ sukhāsukhatō  
hitāhitataḥpramāṇāpramāṇataśca; yataścāyuṣyāñyanāyuṣyāñi ca dravyaguṇakarmāñi  
vēdayatyatō'pyāyurvēdah| tatrāyuṣyāñyanāyuṣyāñi ca dravyaguṇakarmāñi  
kēvalēnōpadēkṣyatē tantrēṇa॥२३॥

tadAyurvedayatItyAyurvedaH; kathamiti cet? ucyate- svalakShaNataH sukhAsukhato  
hitAhitataHpramANApramANatashca; yatashcAyuShyANyanAyuShyANi ca  
dravyaguNakarmANivedayatyato~apyAyurvedaH| tatrAyuShyANyanAyuShyANi ca  
dravyaguNakarmANi kevalenopadekShyante tantraNa॥२३॥

Ayurveda is that source of knowledge which teaches about or deals with *Ayu*. How so? By its characteristics, it imparts the knowledge of joy and suffering, benefit and harm, and authentic/authoritative and unauthentic/unreliable (sources of information). It is also that which informs us about the span of life and substances with properties and actions that result in the same. This will be dealt with in the entire text at various appropriate contexts. [23]

## *Characteristics of happy and healthy life*

तत्रायुरुक्तं स्वलक्षणतो यथावदिहैव पर्वाध्याये च। तत्र शारीरमानसाभ्यां रोगाभ्यामनभिद्रुतस्य विशेषेण  
यौवनवतः समर्थानुगतबलवीर्ययशः पौरुषपराक्रमस्य जानविजानेन्द्रियेन्द्रियार्थबलसमृदये वर्तमानस्य  
परमर्दधिरुचिरविविधोपभोगस्य समृद्धसर्वारम्भस्य यथेष्टविचारिणः सुखमायुरुच्यते; असुखमतो  
विपर्ययेण; हितैषिणः पुनर्भूतानां परस्वादुपरतस्य सत्यवादिनः शमपरस्य परीक्ष्यकारिणोऽप्रमत्तस्य  
त्रिवर्गं परस्परेणानपहतमपसेवमानस्य पूजाहसम्पूजकस्य जानविजानोपशमशीकस्य  
वृद्धोपसेविनः सन्नियतरागरोषेष्यामदमानवेगस्य सततं विविधप्रदानपरस्य  
तपोजानप्रशमनित्यस्याध्यात्मविदस्तत्परस्य लोकमिमं चामुचावेक्षमाणस्य स्मृतिमतिमतो  
हितमायुरुच्यते; अहितमतो विपर्ययेण॥२४॥

tatrāyuruktam svalakṣaṇatō yathāvadihaiva pūrvādhyaīyē ca| tatra śārīramānasābhyaīm  
rōgābhyaīmanabhidrutasya viśēṣēṇa  
yauvanavataḥsamarthānugatabalavīryayaśaḥpauruṣaparākramasya  
jñānavijñānēndriyēndriyārthabalasamudayēvartamānasya  
paramarddhirciravividhōpabhōgasya samṛddhasarvārambhasya  
yathēṣṭavivicāriṇaḥsukhamāyurucyatē; asukhamatō viparyayēṇa; hitaiṣiṇaḥ  
punarbhūtānāṁ parasvāduperatasyasatyavādinah śamaparasya  
parīkṣyakāriṇō'pramattasya trivargaṁparasparēṇānupahatamupasēvamānasya  
pūjārhasampūjakasya jñānavijñānōpaśamaśīlasyavṛddhōpasēvinah  
suniyatarāgarōṣeṣyāmadamānavēgasya satataṁ  
vividhapradānaparasyatapōjñānapraśamanityasyādhyātmavidastatparasya lōkamimam  
cāmuṁ cāvēkṣamānasya smṛtimatimatōhitamāyurucyatē; ahitamatō viparyayēṇa॥२४॥

tatrAyuruktaM svalakShaNato yathAvadihaiva pUrvAdhyAye ca| tatra  
 shArIramAnasAbhyAM rogAbhyAmanabhidrutasya visheSheNa  
 yauvanavataHsamarthAnugatabalavIryayashaHpauruShaparAkramasya  
 jAnavijjAnendriyendriyArthabalasamudayevartamAnasya  
 paramarddhiruciravividhopabhogasya samRuddhasarvArambhasya  
 yatheShTavicAriNaHsukhamAyurucyate; asukhamato viparyayeNa; hitaiShiNaH  
 punarbhUtAnAM parasyAduparatasyasatyavAdinaH shamaparasya  
 parlkShyakAriNo~apramattasya trivargaMparasparesANupahatamupasevamAnasya  
 pUjArhasampUjakasya jAnavijjAnopashamashllasyavRuddhopasevinaH  
 suniyatarAgaroSherShyAmadamAnavegasya satataM  
 vividhapradAnaparasyatapoj~jAnaprashamanityasyAdhyAtmavidastatparasya  
 lokamimaM cAmuM cAvekShamANasyasmRutimatimato hitamAyurucyate; ahitamato  
 viparyayeNa||24||

In this chapter, as in the first chapter of Sutra Sthana, a definition of life has been given in the form of *Ayu*. People whose body and mind are disease-free, and those who are endowed with youth, enthusiasm, strength, virility, reputation, manliness, courage, knowledge of arts and sciences, healthy senses, objects of sensory perceptions, ability of the sensory organs, riches and various luxurious articles for enjoyment, and who can achieve whatever they want and roam as they please are said to lead a happy life. Those who are the well-wishers of all beings, who do not desire the wealth of others, who are truthful, peace loving, who are thoughtful before taking action, who are vigilant, who experience the three important objectives of life (righteousness, wealth and desire) without one affecting the other, who respect superiors, who are endowed with the knowledge of arts, sciences and tranquility, who serve the elders, who have full control over lust, anger, envy, arrogance and pride, who constantly indulge in various types of charity, meditation, acquisition of knowledge and quiet life (solitude), who have full spiritual knowledge and are devoted to it, who work both for the present as well as for the next life, and are endowed with memory and intelligence lead a useful rather beneficial life, while others don't. [24]

### *Signs of decreasing life span*

प्रमाणमायुषस्त्वर्थेन्द्रियमनोबुद्धिचेष्टादीनां विकृतिलक्षणैरूपलभ्यतेऽनिमित्तैः, अयमस्मात्  
 क्षणान्मुहूर्ताद्विवसात्त्रिपञ्चसप्तदशद्वादशाहात् पक्षान्मासात् षण्मासात् संवत्सराद्वा  
 स्वभावमापत्स्यत इति;

तत्र स्वभावः प्रवृत्तेरूपरमोमरणमनित्यता निरोध इत्येकोऽर्थः; इत्यायुषः प्रमाणम्;

अतो विपरीतमप्रमाणमरिष्टाधिकारे;

देहप्रकृतिलक्षणमधिकृत्यचोपदिष्टमायुषः प्रमाणमायुर्वदे ||२५॥

pramāṇamāyusastvarthēndriyamanōbuddhicēṣṭādīnāṁ  
 vikṛtilakṣaṇairupalabhyatē'nimittaiḥ, ayamasmātksaṇānmuhūrtāddivasāt  
 tripañcasaptadaśadvādaśāhāt pakṣānmāsāt ṣaṇmāsāt  
 saṁvatsarādvāsvabhāvamāpatsyata iti; tatra svabhāvah pravṛttēruparamō

maraṇamāṇiyatā nirōdha ityēkō'rthah; ityāyuṣah pramāṇam; atō  
viparīta pramāṇamariṣṭādhikārē; dēha prakṛtilakṣaṇam adhikṛtya cōpadīṣṭamāyuṣah  
pramāṇamāyurvēdē ||25||

pramANamAyuShastvarthendriyamanobuddhiceShTAdInAM  
vikRutilakShaNairupalabhyate~animittaiH,ayamasAt kShaNAnmuhUrtAddivasAt  
tripa~jcasaptadashadvAdashAhAt pakShAnmAsAt ShaNmAsAtsaMvatsarAdvA  
svabhAvamApatsyata iti; tatra svabhAvah pravRutteruparamo maraNamāṇiyatA  
nirodhaityeko~arthah; ityAyuShaH pramANam; ato  
viparīta pramANamariShTAdhikAre; dehaprakRutilakShaNamadhikRutya  
copadiShTamAyuShaH pramANamAyurvede ||25||

The decrease of lifespan is signaled by various abnormal changes in the sensory perception, in the objects of perception, in mind, in the intellect, and in movement. These signals help in predicting the death of an individual at a particular moment or time or day, after three days, five days, a week or ten days and after a fortnight, a month, six months or a year. Return to the natural state (svabhava), cessation of all activities(pravritti uparama), death(marana), temporary state(anityata), restriction in the continuation of life (nirodha)- all these are synonymous with death. In the absence of such signs and symptoms, the life span is to be determined as unlimited from the prognostic point of view. In Ayurveda, life span is determined by characteristics of natural constitution.[25]

### *Objectives of Ayurveda*

प्रयोजनं चास्य स्वस्थस्य स्वास्थ्यरक्षणमातुरस्य विकारप्रशमनं च॥२६॥

prayōjanam cāsyā svasthasya svāsthya rakṣaṇamāturasya vikārapraśamanam ca||26||

prayojanaM cAsya svasthasya svAsthyarakShaNamAturasya vikAraprashamanaM  
ca||26||

The purpose of this science is to preserve the health of the healthy and cure the disease of the unhealthy. [26]

### *Eternal qualities of Ayurveda*

सोऽयमायुर्वेदः शाश्वतो निर्दिश्यते, अनादित्वात्, स्वभावसंसिद्धलक्षणत्वात्, भावस्वभावनित्यत्वाच्च|  
न हि नाभूत् कदाचिदायुषः सन्तानो बुद्धिसन्तानो वा, शाश्वतश्चायुषो वेदिता, अनादि च  
सुखदुःखसद्रव्यहेतुलक्षणमपरापरयोगात्| एष चार्थसङ्ग्रहो विभाव्यते आयुर्वेदलक्षणमिति।  
गुरुलघृशीतोष्णस्निग्धरुक्षादीनां द्रव्याणां सामान्यविशेषाभ्यां वद्धिहासौ, यथोक्तं-  
गुरुभिरभ्यस्यमानैर्गुरुणामुपचयोभवत्यपचयो लघूनां, एवमेवेतर्रामिति, एष भावस्वभावो नित्यः,  
स्वलक्षणं च द्रव्याणां पथिव्यादीनां; सन्ति तु द्रव्याणिगणाश्च नित्यानित्याः| न  
ह्यायुर्वेदस्याभत्वोत्पत्तिरूपलभ्यते, अन्यत्रावबोधोपदेशाभ्याम्; एतद्वै  
द्रव्यमधिकृत्योत्पत्तिमुपदिशन्त्येके। स्वाभाविकं चास्य लक्षणमकृतकं, यदुक्तमिहाद्येऽद्याये च; यथा-  
अन्नरौष्णयम्, अपां द्रवत्वम्। भावस्वभावनित्यत्वमपि चास्य, यथोक्त-  
गुरुभिरभ्यस्यमानैर्गुरुणामुपचयो भवत्यपचयो लघूनामिति॥२७॥

sō'yamāyurvēdah śāśvatō nirdisyatē, anāditvāt,  
 svabhāvasaṁsiddhalakṣaṇatvāt, bhāvasvabhāvanityatvācca| na hi nābhūt  
 kadācidāyuṣah santānō buddhisantānō vā, śāśvataścāyuṣō vēditā, anādi ca  
 sukhaduḥkhaṁsadravyahētulakṣaṇamaparāparayōgāt| eṣa cārthasaṅgrahō vibhāvyatē  
 āyurvēdalakṣaṇamiti| Gurulaghuśītōṣṇasnidharūkṣādīnāṁ dravyāṇāṁ  
 sāmānyaviśeṣābhyaṁ vṛddhihrāsau,  
 yathōktam-*gurubhirabhyasyamāna*irgurūṇāmupacayō bhavatyapacayō laghūnāṁ,  
 ēvamēvētarēśāmiti, ēśabhbāvasvabhāvō nityaḥ, svalakṣaṇāṁ ca dravyāṇāṁ  
 pṛthivyādīnāṁ; santi tu dravyāṇi guṇāśca nityānityāḥ| na  
 hyāyurvēdasyābhūtvōtpattirupalabhyatē, anyatrāvabōdhōpadēśābhyaṁ;  
 ētadvaidvayamadhikṛtyōtpattimupadiśantyēkē| svābhāvikam cāsyā lakṣaṇamakṛtakam,  
 yaduktamihādyē'dhyāyē ca; yathā- agnērauṣṇyam, apāṁdravatvam|  
 bhāvasvabhāvanityatvamapi cāsyā, yathōktam-  
*gurubhirabhyasyamāna*irgurūṇāmupacayōbhavatyapacayō laghūnāmiti||27||

so~ayamAyurvedaH shAshvato nirdishyate, anAditvAt,  
 svabhAvasaMsiddhalakShaNatvAt,bhAvasvabhAvanityatvAcca| na hi nAbhUt  
 kadAcidAyuShaH santAno buddhisantAno vA, shAshvatashcAyuSho veditA, anAdi  
 casukhaduHkhaM sadravyahetulakShaNamaparAparayogAt| eSha cArthasa~ggraHo  
 vibhAvyate AyurvedalakShaNamiti| gurulaghushItoShNasnidharUkShAdInAM  
 dravyANAM sAmAnyavisheShAbhyAM vRuddhihrAsau,yathoktaM-  
*gurubhirabhyasyamAnairgurUNA*mupacayo bhavatyapacayo laghUnAM,  
 evamevetareShAmiti,eSha bhAvasvabhAvo nityaH, svalakShaNaM ca dravyANAM  
 pRuthivyAdInAM; santi tu dravyANi guNAshcanityAnityAH| na  
 hyAyurvedasyAbhUtvotpattirupalabhyate, anyatrAvabodhopadeshAbhyAm;  
 etadvaidvayamadhikRutyotpattimupadishantyekel svAbhAvikaM cAsya  
 lakShaNamakRutakaM, yaduktamihAdye~adhyAye ca; yathA- agnerauShNyam,  
 apAMdravatvam| bhAvasvabhAvanityatvamapi cAsya, yathoktaM-  
*gurubhirabhyasyamAnairgurUNA*mupacayobhavatyapacayo laghUnAmiti||27||

Ayurveda is eternal because of the following: It has no beginning; its characteristics are self-evident, and those of things dealt with it are eternal. It has been seen that *Ayu* (the combination of body, its organs, mind, and soul) and intelligence about *Ayu* (knowledge about *Ayu*) are perpetual. Hence *Ayu* and its knowledge (i.e. Ayurveda) have been eternal. The knower becomes eternal after knowing Ayurveda. Concepts such as happiness and suffering (i.e., health and illness), therapeutics and pathogens, etc. - their causes, signs, and perpetuation are all eternal. This is what is described in Ayurveda. Substances, having properties such as heaviness, lightness, cold, heat, slimy, non-slimy, etc., when combined with other substances, tend to increase by similar properties and decrease by opposite properties. For example, habitual intake of heavy food/drugs increases heaviness and decreases lightness in the body. This is similar to others too. The characteristic of these substances or phenomena is eternal. The characteristics of *prithvi* etc. are eternal. However, matters and their attributes are both eternal and temporary. Theories that claim "Ayurveda came into existence after its creation" or "Ayurveda was conceived by someone and taught to his students" are false.

But based on these statements, some scholars opine that Ayurveda had a beginning. (These characteristics, described in this chapter as well as in the first chapter of Sutra Sthana (i.e., Sutra Sthana 1:42, and 30:23) are innate to Ayurveda and are not fabrications.) Just like the heat of the fire and the liquidity of water, Ayurveda's phenomena are eternal, e.g. habitual intake of heavy things increases the heaviness and decreases the lightness in the body. [27]

### *Eight branches of Ayurveda*

तस्यायुर्वेदस्याङ्गान्यज्ञौ; तद्यथा- कायचिकित्सा, शालाक्यं, शल्यापहर्तृकं, विषगरवैरोधिकप्रशमनं, भूतविद्या, कौमारभूत्यकं, रसायनं, वाजीकरणमिति॥२८॥

tasyāyurvēdasyāṅgānyaśtau; tadyathā- kāyacikitsā, śālākyam, śalyāpahartṛkam, viṣagaravairōdhikapraśamanam, bhūtavidyā, kaumārabhṛtyakam, rasāyanam, vājīkaraṇamiti॥28॥

tasyAyurvedasyA~ggAnyaShTau; tadyathA- kAyacikitsA , shAlAkyAM, shalyApahartRukaM,viShagaravairodhikaprashamanaM, bhUtavidyA, kaumArabhRutyakaM, rasAyanAM, vAjIkaraNamiti॥28॥

Ayurveda has eight branches viz., 1. Internal Medicine, 2. The science is of diseases specific to the supra-clavicular region, i.e., Otorhinolaryngology (ENT) + Ophthalmology 3. Surgery, 4. Toxicology, 5. Psychiatry 6. Pediatrics, 7. The science of rejuvenation and 8. The science of sexual medicine. [28]

### *Learners of Ayurveda and their objectives*

स चाध्येतत्व्यो ब्राह्मणराजन्यवैश्यैः। तत्रानुग्रहार्थं प्राणिनां ब्राह्मणैः, आरक्षार्थं राजन्यैः, वृत्त्यर्थं वैश्यैः; सामान्यतो वा धर्मार्थकामपरिग्रहार्थं सर्वैः। तत्र यद्धयात्मविदां धर्मपथस्थानां धर्मप्रकाशकानां वा मातृपितृभातृबन्धुग्रुजनस्य वा विकारप्रशमने प्रयत्नवान् भवति, यच्चायुर्वेदोक्तमद्यात्ममनुद्यायति वेदयत्यनुविधीयते वा, सोऽस्य परो धर्मः; या पुनरीश्वराणां वसुमतां वा सकाशात्सुखोपहारनिमित्ता भवत्यर्थात्प्रितिराक्षणं च, या च स्वपरिगृहीतानां प्राणिनामातुर्यादारक्षा, सोऽस्यार्थः; यत् पुनरस्यविद्वद्ग्रहणयशः [2] शरण्यत्वं च, या च सम्मानशुश्रूषा, यच्चेष्टानां विषयाणामारोग्यमाधते सोऽस्य कामः। इति यथाप्रश्नमुक्तमशेषेण॥२९॥

sa cādhyētavyo brāhmaṇarājanyavaiśyaiḥ| tatrānugrahārthaṁ prāṇināṁ brāhmaṇaiḥ, ārakṣārthaṁ rājanyaiḥ, vṛtyyarthaiḥ vaiśyaiḥ; sāmānyatō vādharmārthakāmaparigrahārthaṁ sarvaiḥ| tatra yadadhyaātmavidāṁ dharmapathasthānāṁ dharmaprakāśakānāṁ vāmātṛpitṛbhṛtṛbandhugurujanasya vā vikārapraśamanē prayatnavān bhavati, yaccāyurvēdōktamadhyātmamanudhyāyatī vēdayatyānuvidhīyatē vā, sō’sya parō dharmah; yāpunarīśvarānāṁ vasumatāṁ vā sakāśāt sukhōpahāranimittā bhavatyarthāvāptirārakṣaṇāṁ ca, yā casvaparigṛhītānāṁ prāṇināmāturyādārakṣā, sō’syārthaḥ; yat punarasya vidvadgrahaṇayaśah śaraṇyatvāṁ ca, yā ca sammānaśuśrūṣā, yaccēṣṭānāṁ viśayānāmārōgyamādhattē sō’sya kāmah| iti yathāpraśnamuktamaśēṣēṇa॥२९॥

sa cAdhyetavyo brAhmaNarAjanyaavaishyaiH| tatrAnugrahArthaM prANinAM  
brAhmaNaiH, ArakShArthaM rAjanyaaiH, vRuttyarthaiH; sAmAnyato vA

dharmArthakAmaparigrahArthaM sarvaiH| tatra yadadhyAtmavidAM  
 dharmapathasthAnAM dharmaprakAshakAnAM  
 vAmAtRupitRubhrAtRubandhugurujanasya vA vikAraprashamane prayatnavAn  
 bhavati,yaccAyurvedoktamadhyAtmamanudhyAyati vedayatyauvidhlyate vA, so~asya  
 paro dharmaH; yApunarIshvarANAM vasumatAM vA sakAshAt sukhopahAranimittA  
 bhavatyarthAvAptirArakShaNaM ca, yA casvaparigRuhItAnAM  
 prANinAMAturyAdArakShA, so~asyArthaH; yat punarasya vidvadgrahaNayashaH  
 sharaNyatvaM ca, yA ca sammAnashushrUShA, yacceShTAnAM  
 viShayANAmArog YamAdhatte so~asyakAmaH| iti  
 yathAprashnamuktamasheSheNa||29||

Ayurveda should be studied by *Brahmanas* (for providing solace to all), Kings (for protecting his subjects), and *Vaishyas* or traders/business-people (for earning their livelihood). In general, Ayurveda can be studied by all for the attainment of righteousness, wealth, and desire. Righteousness can be attained by treating spiritual scholars who practice and propagate righteousness as a mother, father, a brother, a friend or as a superior. Righteousness can also be achieved by studying and practicing the spiritual knowledge contained in Ayurveda. One can earn wealth and protection by treating kings and other wealthy individuals. The practitioner of Ayurveda can also protect his subordinates and servants by his practice. He can fulfill his desires by gaining respect from the learned people for his abilities to protect others, by reputation, and by keeping his beloved ones like his spouse free from diseases. Thus, all the queries are answered in their entirety. [29]

#### *Eight segments to be learned in Ayurveda*

अथ भिषगादित एव भिषजा प्रष्टव्योऽष्टविधं भवति- तन्त्रं, तन्त्रार्थान्, स्थानं, स्थानार्थान्, अ॒द्यायम्,  
 अ॒द्यार्थान्, प्रश्नं, प्रश्नार्थश्चेति; पृष्टेन चैतद्वक्तव्यमशेषेण वाक्यशो वाक्यार्थशोऽर्थवियवशश्चेति  
 ||30||

atha bhiṣagādita ēva bhiṣajā praṣṭavyōśtaividham bhavati-tantram, tantrārthān,  
 sthānam, sthānarthān, adhyāyam, adhyāyārthān, praśnam, praśnārthāṁscēti; pṛṣṭēna  
 caitadvaktavyamaśēṣēṇa vākyāśōvākyārthaśō'rthāvayaavaśācēti ||30||

atha bhiShagAdita eva bhiShajA praShTavyo~aShTavidhaM bhavati- tantraM,  
 tantrArthAn, sthAnaM, sthAnArthAn, adhyAyam, adhyAyArthAn, prashnaM,  
 prashnArthAMshceti; pRuShTenacaitadvaktavyamasheSheNa vAkyasho  
 vAkyArthasho~arthAvayavashashceti ||30||

A physician should ask other physicians eight questions (to learn Ayurveda):

1. classical text
2. object of text
3. section
4. object of section
5. chapter

6. object of the chapter
7. question/query
8. object of the query raised.

Along these lines the query should be dealt by quoting the text, interpreting it and explanation of its various aspects. [30]

#### *Classical text and its object*

तत्रायुर्वेदः शाखा विद्या सूत्रं जानं शास्त्रं लक्षणं तन्त्रमित्यनर्थान्तरम् ||३१||

तन्त्रार्थः पनः स्वलक्षणैरूपदिष्टः। स चार्थः प्रकरणैर्विभाव्यमानो भूय एव  
शरीरवृत्तिहेतुव्याधिकर्मकार्यकालकर्तृकरणविधिविनिश्चयाद्दशप्रकरणः, तानि चप्रकरणानि  
केवलेनोपदेक्ष्यन्ते तन्त्रेण॥३२॥

tatrāyurvēdaḥ śākhā vidyā sūtram jñānam śāstram lakṣaṇam tantramityanarthāntaram  
||31||

tantrārthaḥ punah svalakṣaṇairupadiṣṭaḥ| sa cārthaḥ prakaraṇairvibhāvyamānō bhūya  
ēvaśarīrvṛttihētuव्याधिकर्मकार्यकालकर्तृकरणविधिविनिश्चयाद्दशप्रकरणः, tāni  
ca prakaraṇānikēvalēnōpadēkṣyantē tantrēṇa॥३२॥

tatrAyurvedaH shAkhA vidyA sUtraM j~jAnaM shAstraM lakShaNaM  
tantramityanarthAntaram ||31||

tantrArthaH punaH svalakShaNairupadiShTaH| sa cArthaH prakaraNairvibhAvyamAno  
bhUya  
evasharIrvRuttihetuव्याधिकर्मकार्यकालकर्तृकरणविधिविनिश्चयाद्दशप्रकर  
aNaH, tAni caprakaraNAni kevalenopadekShyante tanreNa॥३२॥

*Shakha, Vidyā, Sutra, Jnana, Shastra, Lakshana, and Tantra* are synonyms of Ayurveda. The purpose of this science has been explained in its definition. Various topics discussed in this science are Anatomy-Physiology, Dietetics, Etiology, Disease, Treatment for attainment of health, Chronobiology, Physicians, Therapies, and Procedures. These are ten aspects that will be explained in this treatise. [31-32]

#### *Sections and their objects*

तन्त्रस्यास्याष्टौ स्थानानि; तद्यथा- श्लोकनिदानविमानशारीरेन्द्रियचिकित्सितकल्पसिद्धिस्थानानि।  
तत्र त्रिंशदृश्यायकं श्लोकस्थानम्, अष्टाष्टाद्यायायकानि निदानविमानशारीरस्थानानि,  
द्वादशकमिन्द्रियाणां, त्रिंशकंचिकित्सितानां, द्वादशके कल्पसिद्धिस्थाने भवतः॥३३॥

tantrasyāsyāṣṭau sthānāni ; tadyathā-  
ślōkanidānavimānaśārīrendriyacikitsitakalpasiddhisthānāni| tatra trimśadadhyaśakam  
ślōkasthānam, aṣṭāṣṭādhyāyakāni nidānavimānaśārīrasthānāni,dvādaśakamindriyāṇāṁ,  
trimśakam cikitsitānāṁ, dvādaśakē kalpasiddhisthānē bhavataḥ॥३३॥

tantrasyAsyAShTau sthAnAni ; tadyathA-  
shlokanidAnavimAnashArirendriyacikitsitakalpasiddhisthAnAni| tatra

triMshadadhyAyakaM shlokasthAnam, aShTAShTAdhyAyakAni  
nidAnavimAnashAriRasthAnAni,dvAdashakamindriyANAM, triMshakaM cikitsitAnAM,  
dvAdashake kalpasiddhishthAne bhavataH||33||

The following are the eight sections that form Charak Samhita:-

1. Shloka Sthana (or Sutra Sthana) or the section on general principles having thirty chapters;
2. Nidana Sthana or the section on diagnosis of diseases having eight chapters;
3. Vimana Sthana or the section on specific determination of drugs etc., having eight chapters;
4. Sharira Sthana or the section on anatomy including embryology having eight chapters;
5. Indriya Sthana or the section on prognostic signs having twelve chapters;
6. Chikitsa Sthana or the section on therapeutics having thirty chapters;
7. Kalpa Sthana or the section on pharmaceuticals having twelve chapters; and;
8. Siddhi Sthana or the section on the successful administration of Panchakarma (five elimination therapies) having twelve chapters; [33]

भवति चात्र- द्वे त्रिंशके द्वादशकं त्रयं च त्रीण्यष्टकान्येषु समाप्तिरुक्ताः  
श्लोकौषधारिष्टविकल्पसिद्धिनिदानमानाश्रयसञ्जकेषु॥३४॥

bhavati cātra- dvē trimśakē dvādaśakām trayam ca trīṇyaṣṭakānyēṣu samāptiruktāḥ  
ślōkauṣadhāriṣṭavikalpasiddhinidānamānāśrayasañjñakēṣu॥३४॥

bhavati cAtra- dve triMshake dvAdashakaM trayam ca triNyaShTakAnyeShu  
samAptiruktA| shlokauShadhAriShTavikalpasiddhinidAnamAnAshrayasa,jakeShu||34||

Thus it can be said that *Sutra(shloka)* and *Chikitsa(aushadha)* sections have thirty chapters each, *Indriya(arishta)*, *Kalpa(vikalpa)* and *Siddhi* sections have twelve chapters each, and *Nidana*, *Vimana*, and *Sharira(ashraya)* sections have eight chapters each. This is the entire treatise. [34]

#### *Names of Adhyaya(chapters)*

स्वे स्वे स्थाने यथास्वं च स्थानार्थं उपदेक्ष्यते। सविंशमर्द्यायशतं शृणु नामक्रमागतम्॥३५॥

svē svē sthānē yathāsvam ca sthānārtha upadēkṣyatē| saviṁśamadhyāyaśatarṁ śṛṇu  
nāmakramāgatam॥35॥

sve sve sthAne yathAsvaM ca sthAnArtha upadekShyate| saviMshamadhyAyashataM  
shRuNu nAmakramAgatam॥35॥

The objectives of the sequence of the various sections within the treatise, and the names of the one hundred twenty chapters shall be described as follows: [35]

दीर्घञ्जीवोऽप्यपामार्गतण्डुलारग्वधादिकौ। षड्विरेकाश्रयश्चेति चतुष्को भेषजाश्रयः॥३६॥

मात्रातस्याशितीयौ च नवेगान्धारणं तथा। इन्द्रियोपक्रमश्चेति चत्वारः स्वास्थ्यवृत्तिकाः ||३७॥

खुडाकश्च चतुष्पादो महांस्तसैषणस्तथा। सह वातकलाख्येन विद्यान्नैर्देशिकान् बुधः॥३८॥  
स्नेहनस्वेदनाध्यायावुभौ यश्चोपकल्पनः। चिकित्साप्राभृतश्चैव सर्व एव प्रकल्पनाः॥३९॥  
कियन्तःशिरसीयश्च त्रिशोफाष्टोदरादिकौ। रोगाध्यायो महांश्चैव रोगाध्यायचतुष्टयम्॥४०॥  
अष्टौनिन्दितसङ्ख्यातस्तथा लङ्घनतर्पणे। विधिशोणितिकश्चैव व्याख्यातास्तत्र योजनाः॥४१॥  
यज्जःपुरुषसङ्ख्यातो भद्रकाप्यान्नपानिकौ। विविधाशितपीतीयश्चत्वारोऽन्नविनिश्चयाः॥४२॥  
दशप्राणायतनिकस्तथाऽर्थदशमूलिकः। द्वावेतौ प्राणदेहार्थो प्रोक्तौ वैद्यगुणाश्रयौ॥४३॥  
औषधस्वस्थनिर्देशकल्पनारोगयोजनाः। चतुष्काः षट् क्रमेणोक्ताः सप्तमश्चान्नपानिकः॥४४॥  
द्वौ चान्त्यौ सङ्ग्रहाध्यायायाविति त्रिंशकमर्थवत्। श्लोकस्थानं समुद्दिष्टं तन्त्रस्यास्य शिरः शुभम्॥४५॥  
चतुष्काणां महार्थानां स्थानेऽस्मिन् सङ्ग्रहः कृतः। श्लोकार्थः सङ्ग्रहार्थश्च श्लोकस्थानमतः स्मृतम्॥४६॥  
जवराणां रक्तपित्तस्य गुल्मानां मेहकुष्ठयोः। शोषोन्मादनिदाने च स्यादपस्मारिणां च यत्॥४७॥  
इत्यध्यायाष्टकमिदं निदानस्थानमुच्यते। रसेषु त्रिविधे कुक्षौ ध्वंसे जनपदस्य च॥४८॥  
त्रिविधे रोगविज्ञाने सोतःस्वपि च वर्तने। रोगानीके व्याधिरूपे रोगाणां च भिषणिजते॥४९॥  
अष्टौ विमानान्युक्तानि मानार्थानि महर्षिणा। कतिधापुरुषीयं च गोत्रेणातुल्यमेव च॥५०॥  
खुडिका महती चैव गर्भावक्रान्तिरूच्यते। पुरुषस्य शरीरस्य विचयौ द्वौ विनिश्चितौ॥५१॥  
शरीरसङ्ख्या सूत्रं च जातेरष्टममुच्यते। इत्युद्दिष्टानि मुनिना शारीराण्यत्रिसूनुना॥५२॥  
वर्णस्वरीयः पुष्पाख्यस्तृतीयः परिमर्शनः। चतुर्थ इन्द्रियानीकः पञ्चमः पूर्वरूपिकः॥५३॥  
कतमानिशरीरीयः पन्नरूपोऽप्यवाक्षिराः। यस्यश्यावनिमित्तश्च सद्योमरण एव च॥५४॥  
अणुज्योतिरिति ख्यातस्तथा गोमयचूर्णवान्। द्वादशाध्यायकं स्थानमिन्द्रियाणामिति स्मृतम्॥५५॥  
अभयामलकीयं च प्राणकामीयमेव च। करप्रचितकं वेदसमुत्थानं रसायनम्॥५६॥  
संयोगशरमूलीयमासिकतक्षीरकं तथा। माषपर्णभृतीयं च पुमाऽजातबलादिकम्॥५७॥  
चतुष्कद्वयमप्येतदृद्यायद्वयमुच्यते। रसायनमिति ज्ञेयं वाजीकरणमेव च॥५८॥  
जवराणां रक्तपित्तस्य गुल्मानां मेहकुष्ठयोः। शोषोन्मादेऽप्यपस्मारे क्षतशोथोदरार्शसाम्॥५९॥  
ग्रहणीपाण्डुरोगाणां श्वासकासातिसारिणाम्। छर्दिवीसर्पतृष्णानां विषमद्यविकारयोः॥६०॥  
द्विव्रणीयं त्रिमर्मीयमूरुस्तम्भिकमेव च। वातरोगे वातरक्ते योनिव्यापत्सु चैव यत्॥६१॥  
त्रिंशच्चिकित्सितान्युक्तान्यतः कल्पान् प्रचक्षमहे। फलजीमूतकेक्ष्वाकुकल्पो धामार्गवस्य च॥६२॥  
पञ्चमो वत्सकस्योक्तः षष्ठश्च कृतवेधने। श्यामात्रिवृतयोः कल्पस्तथैव चतुरङ्गुले॥६३॥  
तिल्वकस्य सुधायाश्च सप्तलाशङ्खिनीषु च। दन्तीद्रवनन्त्योः कल्पश्च द्वादशोऽयं समाप्यते॥६४॥  
कल्पना पञ्चकर्माख्या बस्तिसूत्री तथैव च। स्नेहव्यापदिकी सिद्धिर्नेत्रव्यापदिकी तथा॥६५॥

सिद्धिः शोधनयोश्चैव बस्तिसिद्धिस्तथैव च प्रासृती मर्मसङ्ख्याता सिद्धिर्बस्त्याश्रया च या॥६६॥

फलमात्रा तथा सिद्धिः सिद्धिश्चोत्तरसञ्जिता। सिद्धयो द्वादशैवैतास्तन्नं चासु समाप्यते॥६७॥

स्वे स्वे स्थाने तथाऽद्याये चाद्यायार्थः प्रवक्ष्यते तं ब्रूयात् सर्वतः सर्वं यथास्वं हर्यर्थसङ्ग्रहात्॥६८॥

dīrghañjīvō'pyapāmārgatañdulāragvadhādikau| ṣaḍvirēkāśrayaścēti catuṣkō  
bhēṣajāśrayah||36||

mātrātasyāśitīyau ca navēgāndhāraṇam tathā| indriyōpakramaścēti catvārah  
svāsthyaavṛttikāḥ ||37||

khuḍḍākaśca catuṣpādō mahāṁstisraiṣanastathā| saha vātakalākhyēna  
vidyānnairdēśikān budhah̄||38||

snēhanasvēdanādhyāyāvubhau yaścōpakalpanah̄| cikitsāprābhṛtaścaiva sarva ēva  
prakalpanah̄||39||

kiyantahśirasīyaśca triśōphāṣṭōdarādikau| rōgādhyāyō mahāṁścaiva  
rōgādhyāyacatuṣṭayam||40||

aṣṭauninditasaṅkhyātastathā laṅghanatarpanē| vidhiśōṇitikaścaiva vyākhyātāstatra  
yōjanah̄||41||

yajjaḥpuruṣasaṅkhyātō bhadrakāpyānnapānikau|  
vividhāśitapīṭīyaścatvārō'nnaviniścayah̄||42||

daśaprāṇāyatanikastathā'rthēdaśamūlikah̄| dvāvētau prāṇadēhārthau prōktau  
vaidyaguṇāśrayau||43||

auśadhasvasthanirdēśakalpanārōgayōjanah̄| catuṣkāḥ ṣaṭ kramēṇōktāḥ  
saptamaścānnapānikah̄||44||

dvau cāntyau saṅgrahādhyāyāviti trimśakamarthavat| ślōkasthānam samuddiṣṭam  
tantrasyāsyā śirah̄ śubham ||45||

catuṣkāñām mahārthāñām sthānē'smin saṅgrahaḥ kṛtaḥ| ślōkārthaḥ saṅgrahārthaśca  
ślōkasthānamataḥ smṛtam||46||

jvarāñām raktapittasya gulmāñām mēhakuṣṭhayōḥ| śōśōnmādanidānē ca  
syādapasmāriṇām ca yat||47||

ityadhyāyāṣṭakamidām nidānasthānamucyatē| rasēṣu trividhē kukṣau dhvamśē  
janapadasya ca||48||

trividhē rōgavijñānē srōtaḥsvapi ca vartanē| rōgānīkē vyādhirūpē rōgāñām ca  
bhiṣagjite||49||

aṣṭau vimānānyuktāni mānārthāni maharṣinā| katidhāpuruṣīyam ca gōtrēṇātulyamēva  
ca||50||

kuḍḍikā mahaṭī caiva garbhāvkrāntirucyatē| puruṣasya śarīrasya vicayau dvau  
viniścitaū||51||

śarīrasaṅkhyā sūtram ca jātēraṣṭamamucyatē | ityuddiṣṭāni muninā  
śārīrāṇyatrīsūnunā||52||

varṇasvarīyah puṣpākhyastrīyah parimarśanah| caturtha indriyānīkah pañcamah  
pūrvavarūpikah||53||

katamāniśarīryah pannarūpō'pyavākśirāḥ| yasyaśyāvanimittaśca sadyōmarāṇa ēva  
ca||54||

anujyōtiriti khyātastathā gōmayacūrṇavān| dvādaśādhyāyakāṁ sthānamindriyāṇāmiti  
smṛtam ||55||

abhayāmalakīyāṁ ca prāṇakāmīyamēva ca| karapracitakāṁ vēdasamutthānaṁ  
rasāyanam||56||

sarṇyōgaśaramūlīyamāsiktakṣīrakāṁ tathā| māṣaparṇabhr̥tīyāṁ ca  
pumāñjātabalādikam||57||

catuṣkadvayamapyētadadhīyādvayamucyatē| rasāyanamiti jñeyāṁ vājīkaraṇamēva  
ca||58||

jvarāṇāṁ rakta-pittasya gulmānāṁ mēhakuṣṭhayōḥ| śōṣōnmādē'pyapasmārē  
kṣataśōthōdarārśasām||59||

grahaṇīpāṇḍurōgāṇāṁ śvāsakāsātisāriṇāṁ| chardivīsarpatr̥ṣṇānāṁ  
viṣamadyavikārayōḥ||60||

dvivraṇīyāṁ trimarmīyamūrustambhikamēva ca| vātarōgē vātaraktē yōnivyāpatsu caiva  
yat||61||

trīṁśaccikitsitānyuktānyataḥ kalpān pracakṣmahē| phalajīmūtakēkṣvākulalpō  
dhāmārgavasya ca||62||

pañcamō vatsakasyōktaḥ ṣaṣṭhaśca kṛtavēdhanē| śyāmātrivṛtayōḥ kalpastathaiva  
caturaṅgulē||63||

tilvakasya sudhāyāśca saptalāśaṅkhinīṣu ca| dantīdravantyōḥ kalpaśca dvādaśō'yam  
samāpyatē||64||

kalpanā pañcakarmākhyā bastisūtrī tathaiva ca| snēhavyāpadikī siddhirnētravyāpadikī  
tathā||65||

siddhiḥ śōdhanayōścaiva bastisiddhistathaiva ca| prāśṛtī marmasaṅkhyātā  
siddhibastyāśrayā ca yā||66||

phalamātrā tathā siddhiḥ siddhiścōttarasañjñitā| siddhayō dvādaśaivaitāstantram cāsu  
samāpyatē||67||

svē svē sthānē tathā'dhyāyē cādhyāyārthah pravakṣyatē| tam brūyat sarvataḥ sarvarṁ  
yathāsvam̄ hyarthasaṅgrahāt||68||

dīrgha<sub>jjivo</sub>apyapAmArgataNDulAragvadhAdikau| ShaDvirekAshrayashceti catuShko  
bheShajAshrayaH||36||

mAtrAtasyAshitlyau ca navegAndhAraNaM tathA| indriyopakramashceti catvAraH  
svAsthyavRuttikAH [7] ||37||

khuDDAkashca catuShpAdo mahAMstisraiShaNastathA| saha vAtakalAkhyena  
vidyAnnairdeshikAn budhaH||38||

snehanasvedanAdhyAyAvubhau yashcopakalpanaH| cikitsAprAbhRutashcaiva sarva  
eva prakalpanAH||39||

kiyantaHshiraslyashca trishophAShTodarAdikau| rogAdhyAyo mahAMshcaiva  
rogAdhyAyacatuShTayam||40||

aShTauninditasa~gkhyAtastathA la~gghanatarpaNe| vidhishoNitikashcaiva  
vyAkhyAtAstatra yojanAH||41||

yajjaHpuruShasa~gkhyAto bhadrakApyAnnapAnikau|  
vividhAshitapltyashcatvAro~annavinishcayAH||42||

dashaprANAyatanikastathA~arthedashamUlikaH| dvAvetau prANadehArthau proktau  
vaidyaguNAshrayau||43||

auShadhasvasthanirdeshakalpanArogayojanAH| catuShkAH ShaT krameNoktAH  
saptamashcAnnapAnikaH||44||

dvau cAntyau sa~ggraḥAdhyAyAviti triMshakamarthavat| shlokasthAnaM  
samuddiShTaM tantrasyAsya shiraH shubham ||45||

catuShkANAM mahArthAnAM sthAne~asmin sa~ggraḥaH kRutaH| shlokArthaH  
sa~ggraḥArthashca shlokasthAnamataH smRutam||46||

jvarANAM raktapittasya gulmAnAM mehakuShThayoH| shoShonmAdanidAne ca  
syAdapasmAriNAM ca yatl||47||

ityadhyAyAShTakamidaM nidAnasthAnamucyate| raseShu trividhe kukShau dhvaMse  
janapadasya ca||48||

trividhe rogaVij~jAne srotaHsvapi ca vartane| rogAnlke vyAdhirUpe rogANAM ca  
bhiShagjite||49||

aShTau vimAnAnyuktAni mAnArthAni maharShiNA| katidhApuruShlyaM ca  
gotreNAtulyameva ca||50||

khuDDikA mahatl caiva garbhAvakrAntirucyate| puruShasya sharIrasya vicayau dvau  
vinishcitaui||51||

sharIrasha~gkhyA sUtraM ca jAterashTamamucyate | ityuddishTAni muninA  
shArIraNyatrishUnunA||52||

varNasvarlyaH puShpAkhyastRutlyA H parimarshanaH| caturtha indriyAnlkaH  
pa~jcamah pUrvarUpikaH||53||

katamAnisharIrlyA H pannarUpo~apyavAkshirAH| yasyashyAvanimittashca  
sadyomaraNa eva ca||54||

aNujiyotiriti khyAtastathA gomayacUrNavAn| dvAdashAdhyAyakaM  
sthAnamindriyANAmi smRutam ||55||

abhayAmalaklyA M ca prANakAmlyameva ca| karapracitakaM vedasamutthAnaM  
rasAyanam||56||

saMyogasharamUllyamAsiktakShIrakaM tathA| mAshaParNabhrutlyAM ca  
pumA~jjAtabalAdikam||57||

catuShkadvayamapyetadadhyaYadvayamucyate| rasAyanamiti j~jeyaM  
vAjIkaraNameva ca||58||

jvarANAM raktapittasya gulmAnAM mehakuShThayoH| shoShonmAde~apyapasmAre  
kShatashothodarArshasAm||59||

grahaNIpANDurogANAM shvAsakAsAtisAriNAm| chardivIsarpatRuShNAnAM  
viShamadyavikArayoH||60||

dvivraNIyaM trimarmlyamUrustambhikameva ca| vAtaroge vAtarakte yonivyApatsu  
caiva yat||61||

triMshaccikitsitAnyuktAnyataH kalpAn pracakShmahe| phalaJImUtakekShvAkukalpo  
dhAmArgavasya ca||62||

pa~jcamo vatsakasyoktaH ShaShThashca kRutavedhane| shyAmAtrivRutayoH  
kalpastathaiva catura~ggule||63||

tilvakasya sudhAyAshca saptalAsha~gkhinIShu ca| dantIdravantyoH kalpashca  
dvAdasho~ayaM samApyate||64||

kalpanA pa~jcakarmAkhyA bastisUtrI tathaiva ca| snehavyApadikI  
siddhirnetravyApadikI tathA||65||

siddhiH shodhanayoshcaiva bastisiddhistathaiva ca| prAsRutI marmasa~gkhyAtA  
siddhirbastyAshrayA ca yA||66||

phalamAtrA tathA siddhiH siddhishcottarasaJjjitA| siddhayo dvAdashaivaitAstantraM  
cAsu samApyate||67||

sve sve sthAne tathA~adhyAye cAdhyAyArthaH pravakShyate| taM brUyAt sarvataH  
sarvaM yathAsvaM hyarthasa~ggrahAt||68||

The names of chapters are:

1. The quest for longevity;
2. Dehusked seed of *Apamarga* (*Achyranthes aspera* Linn);
3. *Aragvadha* (*Cassia fistula* Linn)
4. Six hundred purgatives; This marks the end of the tetrad on drugs.
5. Measurement of eating;
6. Human dietetics;
7. Non-suppression of natural urges;
8. Description of sense organs; The above mentioned four chapters constitute the quadrate on the maintenance of positive health.
9. The minor chapter on the four aspects of therapeutics;
10. The major chapter on the four aspects of therapeutics;
11. Three basic desires of life;
12. *Vata* – its merits and demerits; the above mentioned four chapters constitute the tetrad on the physician, medicine, etc.;
13. Oleation;
14. Fomentation;
15. Requirements of a physician;
16. Duties of a physician; The above mentioned four chapters constitute the tetrad on therapeutic measures.
17. Enumeration of diseases relating to the head;
18. Three types of swelling;
19. Eight abdominal diseases;
20. The major chapter on the enumeration of diseases; The above mentioned four chapters constitute the tetrad on diseases.
21. Eight types of inappreciable persons;
22. Lightening and nourishing therapies;
23. Refreshing regimen;
24. Blood purification and the regimen, therefore; The above mentioned four chapters constitute the tetrad on therapeutics.
25. Origin of man and his diseases;
26. Discourse among Atreya, Bhadrakapya, etc.
27. Properties of diets and drinks;
28. Various types of diets and drinks; The above mentioned four chapters constitute the tetrad on dietetics.

Finally, the last two chapters deal with ten seats of life forces and the ten vital roots in the heart respectively. Thus, the Sutra Sthana constitutes of seven tetrads (each containing four chapters) on drugs, maintenance of positive health, physicians including medicines, etc., therapeutics measures, diseases, some of the fundamental pillars of health management – medicines, physicians, therapeutics, and dietetics are described

consecutively. The first section, as well as the entire treatise, is summarized in the last two chapters. Thus, the first section of thirty chapters is very important. The Sutra Sthana, with its 30 chapters, can be regarded as the brain of the whole treatise and is also known as the *shloka* section.

The Nidana Sthana, or the section on the diagnosis of diseases, includes a detailed study of *jwara* (fever), *raktapitta* (a condition characterized by bleeding from various parts of the body), *gulma* (abdominal tumour), *meha* (obstinate urinary disorders including diabetes mellitus), *kushtha* (obstinate skin diseases including leprosy), *shosha* (consumption), *unmada* (insanity) and *apasmara* (epilepsy). The Nidana Sthana or the section on the diagnosis of diseases contains the above eight chapters providing for the diagnosis of the said ailments.

This forms the basis for the subsequent section of the Vimana Sthana that addresses specific topics of *rasa* or taste, *trividhakuksiya* (three factors of the stomach capacity), *janapadodhvasma* (epidemic diseases), *trividharogavisesavijnana* (three factors for the specific determination of diseases), *strotas* (channels of circulation), *roganika* (classification of diseases), *vyadhirupiya* (classification of patients), and *rogabhishagjitiya* (treatment of diseases).

Vimana Sthana is followed by the Sharira Sthana (the section on anatomy including embryology) which includes *katidhapurusiya* (classification of constituents of the individuals), *atulyagotriya* (exogamy), *khuddikagarbhavakranti* (minor chapter on the formation of foetus), *mahatigarbhavakranti* (major chapter on the formation of foetus), *purushavichaya* (individual self as a replica of the universal self), *shariravichaya* (analysis of the body), *sharirasamkhya* (enumeration of the organs of the body), and *jatisutriya* (process of delivery).

The Sharira Sthana is followed by Indriya Sthana (prognosis of diseases) which includes the following 12 chapters: *Vanasvariya* (prognosis indicated by complexion and voice); *Puspitaka* (infallibility of prognostic signs and symptoms); *Parimarsana* (prognosis indicated by palpation); *Indriyanika* (prognosis indicated by the function of sense organs); *Purvarupiya* (prognosis indicated by premonitory symptoms); *Katamanishaririya* (prognosis indicated by the nature of diseases); *Pannarupiti* (prognosis indicated by the distorted images in the pupil); *Avaksirasiya* (prognosis indicated by symptoms like the inverted reflection of images in the pupil); *Yasyasyavanimittiya* (prognosis indicated by such signs as dark-blue colour of the eye etc.); *Sadyomaraniya* (prognostic signs of imminent death); *Anujyotiya* (prognosis indicated by signs like loss of the complexion of the body); and *Gomayachurniya* (prognosis indicated by signs like the appearance of powder like thing in the head resembling that of cow dung cake). Indriya Sthana or the section on the prognosis of diseases has twelve chapters dealing with the above topics.

The Chikitsa Sthana (section on therapeutics) follows Indriya Sthana with the following 30 chapters. The first two chapters deal with rejuvenation therapies and aphrodisiacs respectively and are the following:

1. The First Chapter:

1. Use of Abhya (*Terminalia cbebula* Linn) and Amalaki (*Emblica Officinalis* Gaertn) for rejuvenation;
2. The desire for longevity;
3. Use of Amalaki (*Emblica Officinalis* Gaertn.) culled by hand;
4. Propagation of the science of rejuvenation.

2. The Second Chapter:

1. Use of the preparation of the root of *sara* (*Saccbarum munja* Roxb.)
2. Use of the rice soaked in milk and such other preparations;
3. Use of milk collected from a cow fed with *mashaparna* (*Teramnus labialis*);
4. Duties of a man who has gained strength, among others.

The remaining 28 chapters of Chikitsa Sthana deal with therapeutics of the said conditions: *jwara* (fever); *raktapitta* ( a condition characterized by bleeding from various parts of the body); *gulma* ( a type of abdominal tumour); *meha* (obstinate urinary disorders including diabetes mellitus); *kushtha* (obstinate skin diseases including leprosy); *sosha* (consumption); *unmada* (insanity); *apasmara* (epilepsy); *kshatha* (phthisis); *shotha* (oedema), *udara* (obstinate abdominal diseases including ascitis); *arshas* (piles); *grahani* (sprue); *pandu* (anemia), *shvasa* (conditions causing dyspnoea including bronchial asthma); *kasa* (cough); *atisara* (diarrhoea); *chhardi* (vomiting); *visarpa* (acute spreading diseases of the skin including erysipelas); *trishna* (thirst); *vishavikara* (poisoning); *madyavikara* (alcoholism); *dvivraniya* (two types of ulcers); *trimarmiya* (diseases appearing in three vital organs of the body); *urustambha* (spastic paraplegia); *vataroga* (diseases specially caused by the vitiation of *vata*); *vatarakta* (gout); and *yonivyapat* (gynecological diseases). Chikitsa Sthana or the section on therapeutics has thirty chapters. (The first chapter deals with *Rasayana* or rejuvenation therapy. It consists of four sub-chapters dealing with the above topics; The remaining twenty-eight chapters of this section deal with the treatment of the said conditions.

Kalpa Sthana, the next section (on pharmaceuticals) has twelve chapters dealing with the preparations of the following drugs: *Phala* (*Randia dumetorum* Lam.); *jimutaka* (*Luffa echinata* Roxb); *iksvaka* (*Ligenaria siceraria* Standl.); *dhamargava* (*Luffa cylindrical* M. Roem); *vatsaka* (*Holarrhena antidysenterica* Wall.); *krtavedhana* (*Luffa acutanula* Roxb.); *syamatirvta* (*Operculina turpetum* R. B.); *chaturangula* (*Cassia fistula* Linn); *tilvaka* (*Symplocos racemosa* Roxb); *sudha* (*Euphorbia nerifolia* Linn); *saptala* (*Acacia concinna* D.C.); and *sankhini* (*Canscora decussate* Roem et. Sch.); *danti* (*Baliospermum montanum* Muell-Arg.), and *dravanti* (*Jatropha glandulifera* Roxb.).

The final section, Siddhi Sthana (on the successful administration of the five elimination therapies), has the following 12 chapters: Factors to be considered for the successful administration of elimination therapies; Persons fit and unfit for the administration of elimination therapies; Administration of enema therapy; Management of complications due to the administration of therapies (such as unctuous enema); Management of complications due to defects in the cannula and the other parts of the equipment used for enema; Management of complications in emesis and purgation therapies;

Management of complications in enema therapy; Enema of one prastha (768 g) in quantity; Management of diseases occurring in the *marma sthana* or the three vital regions of the body; Enema for different types of diseases; Enema prepared of *Phala* (*Randia dumetorum Lam*) etc.; and Urethral and vaginal douches. These are, in brief, the sections and chapters that form the Siddhi Sthana or the section on the successful administration of five elimination therapies has twelve chapters dealing with the above topics; contents of each chapter will be described in the respective chapters and sections. All these, in brief, will be described in all the respective chapters and sections. [36-68]

#### *Derivation of technical terms*

पृच्छा तन्नाद्यथाम्नायं विधिना प्रश्न उच्यते| प्रश्नार्थो युक्तिमांस्तस्य तन्त्रेणैवार्थनिश्चयः ||६९||

निरुक्तं तन्त्रणात्तन्त्रं, स्थानमर्थप्रतिष्ठया| अधिकृत्यार्थमध्यायनामसञ्ज्ञा प्रतिष्ठिता ||७०||

इति सर्वं यथाप्रश्नमष्टकं सम्प्रकाशितम्| कात्स्न्येन चोक्तस्तन्त्रस्य सङ्ग्रहः सुविनिश्चितः ||७१||

pṛcchā tantrādyathāmnāyam vidhinā praśna ucyatē| praśnārthō yuktimāṁstasya  
tantrēṇaivārthanīścayaḥ ||69||

Niruktam tantraṇāttantram, sthānamartha pratiṣṭhayā|  
adhikṛtyārthamadhyāyanāmasañjñā pratiṣṭhitā ||70||

iti sarvam yathāpraśnamaṣṭakam samprakāśitam| kārtsnyēna cōktastantrasya  
saṅgrahaḥ suviniścitaḥ||71||

pRucchA tantrAdyathAmnAyaM vidhinA prashna ucyate| prashnArtho yuktimAMstasya  
tantrēNaivArthanishcayaH ||69||

niruktaM tantraNAttantraM, sthAnamartha pratiShThayA|  
adhikRutyArthamadhyAyanAmasajjA pratiShThitA ||70||

iti sarvaM yathAprashnamaShTakaM samprakAshitam| kArtsnyena coktastantrasya  
sa~ggrahaH suvinishcitaH||71||

A query on any topic within the classical texts, in accordance with Vedic tradition /manner, is called a *prashna* (question). The response to the *prashna* is known as *prashnartha*. Because the text protects the life of a person with its information, it is also called *tantra* (*tantrana* means to sustain the body or to observe the healthy rules). A *sthana* (section) is called so because the information relevant to the theme of the section have been “placed” within that section (*pratistha* = *sthapana*= placed). *Adhyayas*, or chapters, from the specific topics that address a particular aspect or dimension of the section. Thus, clarifications/answers to all the eight questions (raised in para 20 of this chapter) along with a clear summary of the entire text are given. [69-71]

### *Consequences of incomplete knowledge*

सन्ति पाल्लविकोत्पाता: सङ्क्षोभं जनयन्ति ये| वर्तकानामिवोत्पाता: सहसैवाविभाविताः||७२||

तस्मातान् पूर्वसञ्जल्पे सर्वत्राष्टकमादिशेत्| परावरपरीक्षार्थं तत्र शास्त्रविदां बलम्||७३||

शब्दमात्रेण तन्त्रस्य केवलस्यैकदेशिकाः| अमन्त्यल्पबलास्तन्त्रे ज्याशब्देनेव वर्तकाः||७४||

santi pāllavikōtpātāḥ saṅkṣōbhām janayanti yē| vartakānāmivōtpātāḥ  
sahaśaivāvibhāvitāḥ||72||

Tasmāttān pūrvasañjalpē sarvatrāṣṭakamādiśēṭ| parāvaraṇaparīksārthaṁ tatra  
śāstravidāṁ balam||73||

śabdamātrēṇa tantrasya kēvalasyaikadēśikāḥ| bhramantyalpabalāstantrē jyāśabdēnēva  
vartakāḥ||74||

santi pAllavikotpAtAH sa~gkShobhaM janayanti ye| vartakAnAmivotpAtAH  
sahaśaivAvibhAvitAH||72||

tasmAttAn pUrvasa~jjalpe sarvatrAShTakamAdishet| parAvaraṇaparīkShArthaM tatra  
shAstravidAM balam||73||

shabdamAtreNa tantrasya kevalasyaikadeshikAH| bhramantyalpabalAstantrre  
jyAshabdeneva vartakAH||74||

Some people (physicians) who have incomplete knowledge of this science, at times create difficulties for others just like the sudden flight of the bustard (a kind of bird) on seeing signs of danger. Therefore, to assess their knowledge in this science and their superiority or inferiority, one should put forward the eight kinds of questions (mentioned previously) to them before a formal discussion. Only persons well versed in the science can answer such questions. Those who do not know the science fully will panic by the very mention of the entire text just like bustards get frightened by the sound of a bowstring. [72-74]

पशुः पशूनां दौर्बल्यात् कश्चिन्मध्ये वृकायते| स सत्यं वृकमासाद्य प्रकृतिं भजते पशुः||७५||

तद्वदज्ञोऽज्ञमध्यस्थः कश्चिन्मौख्यसाधनः| स्थापयत्याप्तमात्मानमाप्तं त्वासाद्य भित्यते||७६||

बभुर्गूढ इवोर्णाभिरबुद्धिरबहुश्रुतः| किं वै वक्ष्यति सञ्जल्पे कुण्डभेदी जडो यथा||७७||

सद्वृत्तैर्न विगृहणीयादभिषगल्पश्रुतैरपि| हन्यात् प्रश्नाष्टकेनादावितरांस्त्वाप्तमानिनः ||७८||

दम्भिनो मुखरा ह्यज्ञाः प्रभूताबद्धभाषिणः| प्रायः, प्रायेण सुमुखाः सन्तो युक्ताल्पभाषिणः||७९||

तत्त्वज्ञानप्रकाशार्थमहङ्कारमनाश्रितः| स्वल्पाधाराजमुखरान्मर्षयेन्न विवादिनः||८०||

परो भूतेष्वनुक्रोशस्तत्त्वज्ञान(ने)परा दया| येषां तेषामसद्वादनिग्रहे निरता मतिः||८१||

paśuh paśunāṁ daurbalyāt kaścinmadhyē vṛkāyatē| sa satyarām vṛkamāśadya prakṛtim  
bhajatē paśuh||75||

tadvadajñō'jñamadhyasthah kaścinmaukharyasādhanah|  
sthāpayatyāptamātmānamāptam tvāsādya bhidyatē||76||

babhrurgūḍha ivōrṇābhīrabuddhirabahuśrutah| kiṁ vai vakṣyati sañjalpē kuṇḍabhēdī jaḍō yathā||77||

sadvṛttairna vigṛhṇīyādbhiṣagalpaśutairapiḥ hanyāt  
praśnāṣṭakēnādāvitarāṁstvāptamāninaḥ ||78||

dambhinō mukharā hyajñāḥ prabhūtābaddhabhāṣīṇah| prāyah, prāyēṇa sumukhāḥ  
santō yuktālpabhāṣīṇah||79||

tattvajñānaprakāśārthamahaṅkāramanāśritah| svalpādhārājñamukharānmarṣayēnna  
vivādinah||80||

parō bhūtēśvanukrōśastattvajñāna(nē)parā dayā| yēśāṁ tēśāmasadvādanigrahē niratā  
matih||81||

pashuH pashUnAM daurbalyAt kashcinmadhye vRukAyate| sa satyaM vRukamAsAdya  
prakRutiM bhajate pashuH||75||

tadvadaj,aj~jamadhyasthaH kashcinmaukharyasAdhanaH|  
sthApayatyAptamAtmAnamAptaM tvAsAdya bhidyate||76||

babhrurgUDha ivorNAbhīrabuddhirabahuśrutah| kiM vai vakShyati sa~jjalpe  
kuNDabhedI jaDo yathA||77||

sadvRuttairna vigRuhNlyAdbhiShagalpashrutarapiḥ hanyAt  
prashnAShTakenAdAvitarAMstvAptamAninaH ||78||

dambhino mukharA hyaj~jAH prabhUṭAbaddhabhAShiNaH| prAyaH, prAyeNa  
sumukhAH santo yuktAlpabhAShiNaH||79||

tattvaj,<sub>AnaprkAshArthamaha</sub>gkAramanAshritaH| svalpAdhArAj~jamukharAnmarShayenna  
vivAdinaH||80||

paro bhUteShvanukroshastattvaj~jAna(ne)parA dayA| yeShAM  
teShAmasadvAdanigrahe niratA matiH||81||

Amongst weaker animals, any animal may act like a wolf ( or pretend to be very strong/superior). But when it comes across a real wolf, its true nature is revealed. Similarly, a talkative unknowledgeable person may pretend to be an *apta*- a trustworthy knowledgeable authority (in Ayurveda) - while among other ignorant people, but when he comes across a true *apta*, his facade is shattered. Just like a handicapped *babru* (large-brown mongoose) does not look like a normal *babru* and just like a dimwitted man cannot speak amongst scholars, a physician with incomplete knowledge (of Ayurveda) cannot speak amongst knowledgeable physicians. One should not challenge a righteous man even though he is not thoroughly versed in this science. But he who poses to be an expert must be challenged with the eight kinds of questions to break his

facade. A fraud who is ignorant, excessively talkative, or gets into irrelevant conversations or arguments is a stupid/idiotic physician. Genuine physicians are pleasant, well behaved, humble, and speak less but are concise and terse. The frauds, who debate meaninglessly should not be forgiven/spared as they are detrimental to the society. Supreme physicians are those who are greatly compassionate towards all creatures, eager to teach and are adept in refuting false arguments. [75-81]

असत्पक्षाक्षणित्वार्तिदम्भपारुष्यसाधनाः। भवन्त्यनाप्ताः स्वे तन्त्रे प्रायः परविकृत्थकाः॥८२॥  
तान् कालपाशसद्शान् वर्जयेच्छास्त्रदूषकान्। प्रशमज्ञानविज्ञानपूर्णाः सेव्या भिषक्तमाः॥८३॥  
asatpakṣākṣaṇītvārtidambhapāruṣyasādhanāḥ| bhavantyanāptāḥ svē tantrē prāyah  
paravikatthakāḥ||82||  
tān kālapāśasadṛśān varjayēcchāstradūṣakān| praśamajñānavijñānapūrṇāḥ sēvyā  
bhiṣaktamāḥ||83||

asatpakShAkShaNitvArtidambhapAruShyasAdhanAH| bhavantyanAptAH sve tanre  
prAyaH paravikatthakAH||82||

tAn kAlapAshasadRushAn varjayecchAstradUShakAn| prashamaj<sub>jAnavij</sub>jAnapUrNAH  
sevyA bhiShaktamAH||83||

Those who are inefficient and lack proper knowledge of Ayurveda take refuge in fraudulent schools of thought, make many excuses for lack of time or sudden illness, are pretentious, use rude language and speak ill of others during debates. They are like the noose of *Kala* (God of death). They slander the scriptures and bring the science to disrepute. They should, therefore, be shunned. On the other hand, one should avail (services of) good physicians who are always calm and composed, fully knowledgeable in Ayurveda. [82-83]

### Importance of scientific knowledge

समग्रं दुःखमायतमविज्ञाने द्वयाश्रयम्। सुखं समग्रं विज्ञाने विमले च प्रतिष्ठितम्॥८४॥  
इदमेवमुदारार्थमज्ञानां न प्रकाशकम्। शास्त्रं दृष्टिप्रणष्टानां यथैवादित्यमण्डलम्॥८५॥  
samagram duḥkhamāyattamavijñānē dvayāśrayam| sukhaṁ samagram vijñānē vimalē  
ca pratiṣṭhitam||84||

idamēvamudārārthamajñānāṁ na prakāśakam| śāstraṁ dṛṣṭipraṇaśtaṁ  
yathaivādityamaṇḍalam||85||

samagraM duHkhamAyattamavij~jAne dvayAshrayam| sukhaM samagraM vij~jAne  
vimale ca pratiShThitam||84||

idamevamudArArthamaj~jAnAM na prakAshakam| shAstraM dRuShTipraNaShTAnAM  
yathaivAdityamaNDalam||85||

All the sufferings - diseases of both body and mind - are caused by ignorance. All happiness /health is due to the clear knowledge. Just as the Sun cannot help a blind man to see things even with all its light, similarly Ayurveda, which generously guides us through the path of dharma, artha, kama, and moksha, cannot guide someone devoid of its understanding or is a skeptic. [84-85]

## Summary

तत्र श्लोकाः- अर्थं दशमहामूलाः सञ्ज्ञा चासां यथा कृता| अयनान्ताः षडग्र्याश्च रूपं वेदविदां च यत्||८६||

सप्तकश्चाष्टकश्चैव परिप्रश्नाः सनिर्णयाः| यथा वाच्यं यदर्थं च षड्विधाश्चैकदेशिकाः||८७||

अर्थदशमहामूले सर्वमेतत् प्रकाशितम्| सङ्ग्रहश्चायमध्यायस्तन्त्रस्यास्यैव केवलः||८८||

यथा सुमनसां सूत्रं सङ्ग्रहार्थं विधीयते| सङ्ग्रहार्थं तथाऽर्थानामृषिणा सङ्ग्रहः कृतः||८९||

tatra ślōkāḥ- arthē daśamahāmūlāḥ sañjñā cāsāṁ yathā kṛtāḥ ayanāntāḥ ṣaḍagryāśca rūpāṁ vēdavidām ca yat||86||

saptakaścāṣṭakaścaiva paripraśnāḥ sanirṇayāḥ| yathā vācyāṁ yadarthaṁ ca ṣaḍvidhāścaikadēśikāḥ||87||

arthēdaśamahāmūlē sarvamētat prakāśitam| saṅgrahaścāyamadhyāyastantrasyāsyāiva kēvalaḥ||88||

yathā sumanasāṁ sūtram saṅgrahārthaṁ vidhīyatē| saṅgrahārthaṁ tathā'rthānāmr̥ṣinā saṅgrahaḥ kṛtaḥ||89||

tatra shlokAH- arthe dashamahAmUIAH sa<sub>j</sub>jA cAsAM yathA kRutA| ayanAntAH ShaDgryAshca rUpaM vedavidAM ca yat||86||

saptakashcAShTakashcaiva pariprashnAH sanirNayAH| yathA vAcyAM yadarthaM ca ShaDvidhAshcaikadeshikAH||87||

arthedashamahAmUle sarvametat prakAshitam| sa~ggrahashcAyamadhyAyastantrasyAsyaiva kevalaH||88||

yathA sumanasAM sUtraM sa~ggraArthaM vidhlyate| sa~ggraArthaM tathA~arthAnAmRuShiNA sa~ggraHaH kRutaH||89||

The nomenclature of the ten vessels attached to the heart (*mahamula*), the foremost ones among the six categories of regimen, the characteristic features of learned physicians, the eight kinds of questions along with their replies, methods for replying, their elaboration and six types of fraudulent physicians/quacks – all these have been described in this chapter on the “Ten great vessels having their roots in the heart”. A summary of the entire treatise is given in this chapter. Just as flowers are strung into a garland with the help of a thread (*sutra*), so also are the topics/objects of the whole text are briefly woven here in the Sutra Sthana. [86-89]

इत्यग्निवेशकृते तन्त्रे चरकप्रतिसंस्कृते श्लोकस्थानेऽर्थदशमहामूलीयो नाम त्रिंशोऽद्यायः||३०||

अग्निवेशकृते तन्त्रे चरकप्रतिसंस्कृतेइयताऽवधिना सर्वं सूत्रस्थानं समाप्यते

ityagnivēśakṛtē tantrē carakapratisaṁskṛtē ślōkasthānē'rhēdaśamahāmūlīyō nāma  
trimśō'dhyāyah||30||

agnivēśakṛtē tantrē carakapratisaṁskṛtēiyatā'vadhinā sarvam sūtrasthānam samāpyatē  
ityagniveshakRute tanre carakapratisaMskRute shlokasthAne~arthedashamahAmUllyo  
nAmatriMsho~adhyAyaH agniveshakRute tanre carakapratisaMskRuteiyatA~avadhinA  
sarvaM sUtrasthAnaM samApyate||30||

Thus concludes the 30th chapter on the “Ten Great Vessels having Their Roots in the Heart” of the *Sutra* section of the work by Agnivesha as composed by Charak. Here ends the section on general principles of Ayurveda (Sutra Sthana) of Agnivesha’s work as composed by Charak.

## Tattva Vimarsha (Fundamental Principles)

- The heart is a vital organ with ten channels, circulating ojas, responsible for maintaining life.
- The heart is the center for psycho-cognitive functions and distinct spiritual characters. It has complex bidirectional inter-relationship with a brain.
- Presence and absence of ojas is an indicator of life and death.
- The heart, ten channels, and ojas are nourished by diet, exercise, and peaceful mind. The heart and ojas shall be specifically protected from mental sufferings.
- Non-violence is the utmost one to bestow longevity of living beings.
- Valor is the best among promoters of strength.
- Knowledge is the one which should always be increased.
- Self-control is the best factor for staying happy.
- Discovery/understanding/realization is the best one for feeling exalted/ecstatic.
- Celibacy is the most effective factor in the path for self-realization.
- Ayu (life) is the continuity of consciousness, being alive, bonding with the body and its sustenance. Ayurveda deals with its beneficial factors to stay healthy and happy.
- The end of a lifespan is signaled by various abnormal changes in the sensory perception, in the objects of perception, in mind, in the intellect, and in movement.
- Ayurveda is eternal because of the following: It has no beginning; its characteristics are self-evident, and those of things dealt with it are eternal.
- All the sufferings - diseases of both body and mind - are caused by ignorance. All happiness /health is due to the clear knowledge.
- Ayurvedic expert is the one who knows fundamental principles and their therapeutic applications, and he can explain to his pupils of less or high intelligence.

## Vidhi Vimarsha [Applied Inferences)

### History of medicine

There are a few compelling similarities between ancient Greek medical literature and Ayurveda. However, 'which school of medicine borrowed these ideas from whom?' - Has been an unresolved mystery. Some of the ideas that are significantly common to these two systems are humorism, the mechanism of blood formation, breathing, and circulation. One of the points that are widely debated in this context is the supremacy of brain versus the supremacy of heart. It looks like Hippocrates, Aristotle, Erasistratus and Galen had this confusion over the exact functions of the heart and the brain. They ascribed to the heart the functions such as perception of the sensations, motor control, intellect, emotions, etc. The above verse may be read with this background in mind.<sup>289</sup> Another explanation could, however, be that these vital entities are functionally dependent on the heart, though not exactly located there.

The functions of the brain are in fact well-documented in Ashtanga Hridaya<sup>290</sup>, in the context of *prana vayu*, whose anatomical location is *murdha* (head). Vaghbata in this context explains the functions of *prana vayu* to be the control of higher mental activities, heart, respiration, swallowing, spitting, belching, sneezing and other sensory modalities. Even in Bhela Samhita, the location of mind has been documented to be in the head. [Verse 3, 4]

The detailed information on different kinds of blood vessels, functions of the heart, and physiology of circulation can be found in a published review paper titled "The history of the discovery of blood circulation: unrecognized contributions of Ayurveda masters."<sup>291</sup> [Verse 12]

### Method of learning Ayurveda

The ideal way of reading, understanding and teaching a good textbook in the manner that is comprehensible for all categories of students has been explained. Repetition of the concepts that are complex has been further highlighted. The contemporary theories on education to highlight the optimal repetition to enable good comprehension. [Verse 16-19]

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<sup>289</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>290</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

<sup>291</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

Unlike various healthcare systems available today, Ayurveda is unique in its broad approach to health in particular and life in general. Besides managing diseases, its primary aim is to improve the quality of health and thus, prevention of diseases. Ayurveda considers myriad factors affecting human health in societies – at a macro or gross level – as well as at an individual (or micro level). Since each has a different *Prakriti* (body type), the factors favoring health have been systematically classified so that a healthcare provider can choose those factors by the person's body type and guide him/her to achieve a state of optimum health while preventing diseases. Similarly, in the case of diseases, personalized treatment with minimal side effects can be provided through Ayurveda. In the current world, where diseases, especially cancer, antibiotic resistant infections and autoimmune diseases are rapidly increasing, it is important to understand what health is and how to prevent disease. Sushruta has defined health as "a state of a dynamic equilibrium between entities that constitute a human being such as dosha, agni, dhatus, mala, atma, indriya, and manas." [Su.Sa. Sutra Sthana 15/48] <sup>292</sup> These factors have been elaborated at different relevant places in chapters of Charak Samhita.

### Estimation of life span

As indicated earlier in this chapter and preceding chapters, Ayurveda is that source of knowledge which teaches and deals with Ayu (life). How so? By its characteristics, it imparts knowledge of joy and suffering, benefit and harm, and authentic/authoritative and unauthentic/unreliable (sources of information). It is also that body of knowledge which informs us about long life and short life (i.e., lifespan) and substances with its properties & actions that decide a person's longevity.

The end of a life span is signaled by the abnormal changes in the sensory perception, in the objects of perception, in mind, in the intellect, and in movement. These signals help in the prediction of the death of an individual at a particular moment or time or day, after three days, five days, a week or ten days and after a fortnight, a month, six months or a year. *Svabhava* (return to the natural state), *uparama* of *pravritti* (cessation of all activities), *maraṇa* (death), *anityata* (temporary state), *nirodhā* (restriction in the continuation of life)- all these are synonymous with death. This is at the end of life. In the absence of such signs and symptoms, the life span is to be determined as unlimited from the prognostic point of view. In Ayurveda, the life span is determined by nature of the physique, constitution, and special signs. The purpose of this Science (Ayurveda) is to preserve the health of the healthy and cure the disease of the unhealthy.

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<sup>292</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin 2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

## Non-violence and other factors for sustaining life

Leading a righteous, non-violent life bestows longevity in human beings while maintaining harmony within societies and the environment at large. As discussed earlier in this (and the preceding) chapter, Valor is the best value among those that promote strength; knowledge is one thing that should always be increased; self-control should always be exercised to stay happy; discovery/understanding/realization helps the most in creating a feeling of exaltation/ecstasy, while celibacy is the most important attribute necessary in the path to self-realization, as per the view of Ayurvedic scholars.

## Medical Education

Current medical education is disease-centric<sup>293</sup> but does not consider disease prevention as its priority. This is because of lack of understanding about what health is and how it can be preserved protected and rejuvenated. To provide complete care, a physician should be trained in both health and disease management. He should receive knowledge from authentic books and understand the practical applications of the concepts from experienced teachers before he starts taking care of people on his own. Besides increased incidence of diseases in humans, there is increasing polarization and intolerance in our societies causing discord and violence. There is environmental degradation of the planet evidenced by global warming and increased pollution. All these phenomena imply a deteriorating health of humans, society and the planet at large. Ayurveda considers the human individual as a microcosm that reflects the health of the universe at large – the macrocosm. A healthy planet would need to have healthy societies, requiring healthy human beings. Imbalances within the bodily elements – the dosha, dhatu,etc. – lead to imbalances between the individual and his environment. This underscores the value of imbibing the knowledge about health from Charak Samhita.

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<sup>293</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

## Nidana Sthana

### Preamble of Nidana Sthana (Section on Diagnosis)

The section Nidana Sthana deals with principles of diagnosis of diseases. The term Nidana is applied for knowing the origin of disease (vyadhijanaka) and comprehensive information of disease (vyadhibodhaka). [Chakrapani on Cha.Sa.Nidana Sthana 1/1-2]

### Fundamental principles of diagnosis

Nidana Sthana, the second section within Charak Samhita, is about guidelines for diagnosing disease on the basis of detailed history and clinical examination. The word Nidana literally means primary cause and diagnosis.<sup>294</sup> The five methods to know a disease viz. hetu (causative factors), purvarupa (premonitory signs and symptoms), rupa (clinical features), upashaya (pacifying factors) and samprapti (etio-pathogenesis). The comprehensive study guides a physician to diagnose and treat disease with minimal use of laboratory, imaging and other tools.

### Important aspects of knowledge of disease

400px|Image 1:Aspects of Nidana Section|thumb

Nidana section studies diagnostic principles in view of two important aspects like knowledge of roga (disease) and rugna (patient). It always considers interaction between the individual and the affecting pathological entities. It also considers the prognosis and inter-relation of different diseases or co-morbid conditions.[Image 1: Aspects of Nidana Section]

### Knowledge of the individual

Before knowing disease, one needs to know the self-healing capacity of the human being. This depends upon equilibrium of five components of health, namely dosha (regulatory functional factors of body and mind), agni (digestive and metabolic capacity), dhatu (body tissues), mala (metabolic waste products) and psycho-spiritual state. Health is a state of equilibrium, whereas disease is a state of dis-equilibrium of any of these factors.

According to swabhavoparam vada, the resolution / destruction of the existing always happens naturally in the course of time. So the nature itself heals disequilibrium. [[/Chikitsaprabhritiya\_Adhyaya#Swabhavoparama\_vada\_(theory\_of\_natural\_destruction)[Cha.Sa.][Sutra\_Sthana]Chikitsaprabhritiya Adhyaya#Swabhavoparama vada (theory of natural destruction)[Cha.Sa.Sutra Sthana.16/27]. This aspect of host

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<sup>294</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

defense mechanism is important to be assessed for knowing natural healing capacity of an individual. In the fourth chapter, Prameha Nidana, the process of onset of disease through interaction between aggravating and pacifying factors is described [[/Prameha\_Nidana#Process\_of\_Onset\_of\_Disease][[Cha.Sa. Nidana Sthana 4/4]]. If the host defense factors are stronger than aggravating ones, then the disease will not occur and vice versa. Therefore, before making a diagnosis of a disease, examination of patient is important with emphasis on his prakriti (basic constitution), sara (quality of tissues) etc described in context of [[/Rogabhishagjitiya\_Vimana#Examination\_of\_patient][ten fold examination of the patient[Cha.Sa. Vimana Sthana 8/94-131]. Every person has a unique constitution and hence the same biological investigations cannot be precise to assess his health status completely. Personalized assessment is important to diagnose normal and abnormal state of the individual.

## Knowledge of disease

After thorough examination of an individual, one shall evaluate the disease. The second part of diagnostic protocol provides comprehensive knowledge of disease. This includes the methods to elucidate causative factors (hetu), observe premonitory signs and symptoms (purvarupa), clinical features (rupa), pathogenesis (samprapti), and pacifying factors (upashaya). The set of these five diagnostic tools is called as 'Nidana Panchaka'. This is described and applied in clinical practice to know each disequilibrium condition.

The phenomena of a disease causing another disease is described as Nidanarthakara roga. Upadrava (complications), Udarka (marks of disease after it is cured) are applied for knowing the cause-effect relationship in pathogenesis of disease.

Principles of management of disease are mentioned in brief in each chapter to denote pacifying factors of disease. Each chapter of this section follows the same protocol for comprehensive knowledge of disease.

## Importance of eight chapters

This section comprises eight different chapters as described below:

- The first chapter, Jwara Nidana , introduces basic principles of diagnosis of a disease as well as the disease jwara with involvement of rasa dhatu as dushya. The chapter discuss diagnosis of disorders of hyper-pyrexia and various types of fever.
- The second chapter, Rakta Pitta Nidana, deals with various pathologies related to rakta dhatu. This chapter details the diagnosis of bleeding disorders.
- The third chapter, Gulma Nidana, deals with mamsa dhatu(muscle tissue) predominantly. This chapter describes diagnosis of lumps in abdomen, tumors.

- The fourth chapter, Prameha Nidana, involves meda dhatu (tissue fat) predominantly. This chapter describes the diagnosis of disorders of lipid metabolism, obstinate urinary disorders including diabetes.
- The fifth chapter, Kushtha Nidana, involves seven dushya (vitiated factors). This chapter deals with diagnosis of skin disorders.
- The sixth chapter, Shosha Nidana, deals with the pathology of emaciation. This chapter describes diagnosis of degenerative disorders that involve depletion of body tissues.
- The seventh chapter, Unmada Nidana explain insanity and psychotic disorders.
- The eighth chapter, Apasmara Nidana deals with epilepsy and seizure disorders.

These eight chapters represent pathogenesis of major diseases described in detail in this section. Each chapter directs towards variety of pathogenic processes related interaction of vitiated dosha with dhatu to cause disease.

### **Guidelines to diagnose anukta**

vyadhi (new or untold diseases in text)

There are innumerable diseases. Major diseases are mentioned in this text. Therefore one may not find complete description of certain diseases seen in contemporary era. Any new or unknown disease should be studied by assessment of vitiated dosha and dushya (vitiated factors). The criteria like type of pain, appearance (color), etiology, site, symptoms and name shall be applied for identification.(Cha.Su.18/42-43)

All endogenous diseases start with vitiation of dosha. The causative factors elucidated in the detailed history of a patient's diet, lifestyle, psychological frame and others direct the vitiation of a specific dosha. Then their status (increase or decrease) can be assessed based on the premonitory signs and clinical features. Then after evaluation of aggravating (anupashaya) and pacifying (upashaya) factors is done, the sequence of events in the pathogenesis of a disease is understood and accordingly treatment protocol is formulated.

Prajnaparadha (intellectual errors, or knowingly violating rules) is one of the fundamental cause of all endogenous and exogenous diseases.

Asatmendriyarthasamyoga (improper union of senses with their objects) and parinama(time) are other two causative factors . These principles reveal that all idiopathic diseases of unknown etiology also have a definite cause, that needs to be searched and removed for its proper management.

In nutshell, one should initiate any treatment after acquiring complete knowledge of following:

- Inherent nature of the disease
- Its pathogenesis
- Origin or site of lesion and location of presentation

- Etiological factors. [Cha. Sa. Sutra Sthana 18/44-47]

## Importance of studying Nidana section

- It is highly important to know the fundamental cause of any disease. Complete cure in curable diseases and management of palliable diseases can only be achieved after Nidana Parivarjana (removing the cause). If the cause is removed, then half the treatment is done. This stops progression of disease as well as helps the host to return to the normal state. The focus of current healthcare system is more on disease management after its complete manifestation; while Ayurveda emphasizes on identification of abnormality at an early stage, to prevent its further progression.
- The journey of a disease from the initial stage of accumulation of vitiating factors to complete manifestation of its symptoms shall be studied well for its complete knowledge.
- The knowledge of Nidana can be helpful in reducing healthcare cost by reducing use of invasive and non invasive medical diagnostic tools.

## Researches

1. A team of researchers compiled all Sanskrit texts of Nidana Sthana of Charak Samhita in a project report.<sup>295</sup>
2. Shrirang S.G. have done a critical study on Nidana Sthana with special reference to Prameha Nidana <sup>296</sup>
3. Shashirekha H. K. has studied Shosha Nidana described in Nidana Sthana. <sup>297</sup>

## More information

The following chapters in other sections deal with detailed information about diagnostic principles and classification of disease.

- Mahachatushpada Adhyaya
- Tistraishaniya Adhyaya
- Kiyanta Shiraseeya Adhyaya

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<sup>295</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

<sup>296</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

<sup>297</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

- Trishothiya Adhyaya
- Ashtodariya Adhyaya
- Maharoga Adhyaya
- Trividha Roga Vishesha Vijnaniya Vimana
- Roganika Vimana
- Vyadhita Rupiya Vimana
- Rogabhishagjitiya Vimana

Moreover each chapter of Chikitsa sthana describes the five assessment tools (nidana panchaka) of respective diseases.

## All Abstracts

The new learners of Nidana sthana can read all abstracts of chapters of this section on the Abstracts- Nidana Sthana page.

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## Jwara Nidana

### Nidana Sthana Chapter 1. Fundamental Principles of Diagnosis and Jwara

#### Abstract

Nidana Sthana deals with the etiology, symptomatology, and means of diagnosis of diseases. It begins with a generalized set of fundamental principles of diagnosis and then proceeds to specialized studies of diseases. The first part of this chapter deals with the necessary tools for acquiring a comprehensive knowledge of any disease. A set of five important tools/components - etiology, premonitory signs, clinical features, pacifying factors and pathogenesis termed as 'Nidana Panchaka' helps in understanding a disease thoroughly. Each of these tools has a specific significance in diagnosis and explores an important aspect of the disease. Etiology helps to ascertain the causative factors of the disease and diagnosis helps in determining the nature of the disease by causative factors, premonitory signs, actual signs, exploratory signs, and pathogenesis. Comprehensive management of disease and restoration of health is not possible without complete knowledge of all aspects of the disease process. The second part of the chapter uses these tools to explain fever (jwara) and its types (endogenous and exogenous), as well as methods to manage it. Jwara is caused by the accumulation of vitiated dosha at the site of digestion and further affliction of digestion and thermal regulation in the body. Considering the basic tools for comprehensive understanding of disease, it is regarded as an important chapter. **Keywords:** Diagnosis, nidana, hetu, etiology, poorvarupa, premonitory signs, rupa, clinical signs, upashaya, pacifying factors, samprapti, pathogenesis, jwara, nija, aagantu jwara, ghrita ,ghee, endogenous causes, exogenous causes, fever.

#### Introduction

A physician cannot treat a patient if he does not possess a complete understanding of a disease. [Cha.Sa.Vimana Sthana 4/12] Accurate diagnosis of a disease is important before initiating any treatment, and any understanding of a disease's manifestation is incomplete without understanding its nidana (etiology), poorvarupa (premonitory symptoms), linga (actual sign and symptoms), upashaya (pacifying factors) and samprapti (pathogenesis) – or the *Nidana Panchaka* (literally, the five components of nidana). [Cha.Sa.Nidana Sthana 1/6] A disease's lifecycle starts with certain premonitory symptoms and ends with its complete manifestation, or samprapti. Between these two stages of the disease, the body shows various signs and symptoms that could be observed by any knowledgeable physician, using *Nidana Panchaka* . Naturally, any disease, if diagnosed very early, could be prevented from manifesting itself through a variety of interventions. [Cha.Sa.Sutra Sthana 10/7] A proper understanding of the *Nidana Panchaka* helps the physician using various therapies, to establish an equilibrium among the patient's dosha, dhatus, and mala – since it is the vitiation of these body features that cause a disease. A therapy is considered pure or correct (*vishuddha*) when it cures the disease without giving rise to another disease. [Cha.Sa.Nidana

Sthana 8/23] Curable diseases can progress to incurable if they are not properly treated. [Cha.Sa.Nidana Sthana 8/35]

*Nidana Panchaka* described here can be supplemented with diagnostic tests and medical investigations to study a condition. Access to complete knowledge of dietary and lifestyle activities of a person, specific disease provoking factors, clinical history or health records of past diseases or conditions, and a thorough clinical examination of all bodily systems would help provide a complete view of a patient's condition.

Thus, the first part of the chapter deals with the *Nidana Panchaka*. The second part, then, takes this important concept and applies it on the most generic of conditions afflicting patients – *jwara*. This also reveals how the Nidana Sthana section of the Charak Samhita is structured – it starts with the generic or the foundational condition (that, in many cases, acts as a causative factor itself), and then moves on to discussing the vitiation of the dhatu that are causes of all somatic diseases – by the order of their importance (i.e., starting with rasa dhatu) – and ends with a study of vitiation of Rajas and Tamas (i.e., causes of mental diseases).

It is important to note here that *jwara* is an independent ailment, per Ayurveda, but also a secondary condition of other diseases, and also an etiology responsible for various diseases. For example, *jwara* gives rise to *raktapitta* (haemorrhagic disease), which in turn causes *jwara*, and both cause *shotha* (phthisis). Thus, *jwara* is an etiology in this context, or a *nidanarthakara*. Sushruta describes *jwara* at first as a complication of a wound in an afflicted person because it is the chief among diseases and has emerged “from the fiery wrath of Lord Rudra”, per Vedic mythology. Explaining its nature, he says that it influences an individual particularly at the time of his birth and death. But in this chapter, *jwara* is described as an independent disease which acts upon *vata*, *pitta*, and *kapha* as an immediate etiological factor to cause fever. Besides this (as a cause), various indirect causes have also been described to explain the vitiation of each dosha, along with their pathogenesis and symptoms separately. However, it is important to note that while there could be any number or types of causes, *amashaya* (stomach) is common to all types of *jwara*. Pathogenetic dosha combined with heat located in *amashaya* and accompanying the first dhatu created with the digestion of food (also known as *rasa*) obstructs the passage of *rasa* and *sweda*, causing them to spread all over the body in various ways raising the body temperature of a person. This rising temperature is the manifestation of fever.

Depending upon the etiological factors, Ayurveda prescribes one of two types of therapies – spiritual and rational. A specific rational treatment of *jwara* could involve the use of processed ghee (clarified butter) with suitable drugs in a chronic fever is to alleviate all the three dosha.

## Sanskrit Text, Transliteration and English Translation

अथातो ज्वरनिदानं व्याख्यास्यामः||१||

इति ह स्माह भगवानात्रेयः||२||

athātō jwaranidānam vyākhyāsyāmah||1||

iti ha smāha bhagavānātrēyah||2||

athAto jwaranidAnaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Jwara Nidana”(Fundamental Principles of Diagnosis and Fever). Thus said Lord Atreya. [1-2]

## Principles of knowledge of disease

### *Synonyms of Nidana (causative factors) and its types*

इह खलु हेतुनिमित्तमायतनं कर्ता कारणं प्रत्ययः सम्त्थानं निदानमित्यनर्थान्तरम् तत्त्वविधम्-  
असात्म्येन्द्रियार्थसंयोगः, प्रजापराधः, परिणामश्चेति||3||

iha khalu hēturnimittamāyatanam kartā kāraṇam pratyayah samutthānam  
nidānamityanarthāntaram tattrividham-asātmyēndriyārthasaṁyōgah, prajñāparādhah,  
pariṇāmaścēti||3||

iha khalu heturnimittamAyatanaM kartA kAraNaM pratyayaH samutthAnaM  
nidAnamityanarthAntaram| tattrividham- asAtmyendriyArthasaMyogaH,  
praj~jAparAdhaH, pariNAmashceti||3||

- Hetu, nimitta, ayatana, karta, karana, pratyaya and samutthana are synonyms of nidana (causative factors).

Nidana is of three types:

1. Asatmyendriyarthatasamyoga (unsuitable contact of sense organs with their objects)
2. Prajnapanaradha (intellectual errors or knowingly engaging in harmful activities), and
3. Kala (time, seasonal, temporal factors). [3]

### *Types of diseases*

अतस्त्रिविधा व्याधयः प्रादुर्भवन्ति- आग्नेयाः, सौम्याः, वायव्याश्च;-द्विविधाश्चापरे- राजसाः, तामसाश्च||4||

atastrividhā vyādhayah prādurbhavanti- āgnēyāḥ, saumyāḥ, vāyavyāśca;  
dvividhāścāparē- rājasāḥ, tāmasāśca||4||

atastrividhA vyAdhayaH prAdurbhavanti- AgneyAH, saumyAH, vAyavyAshca;  
dvividhAshcApare- rAjasAH, tAmasAshca||4||

The (Somatic) diseases manifest in three types, viz.

1. Agneya (pitta dosha dominant diseases)

2. Saumya (kapha dosha dominant diseases)
3. Vayavya (vata dosha dominant diseases).

Others (psychic) are of two types viz.

1. Rajas(Rajas dosha dominant diseases)
2. Tamas (Tamas dosha dominant diseases). [4]

#### *Synonyms of disease*

तत्र व्याधिरामयो गद आतङ्को यक्षमा ज्वरो विकारो रोग इत्यनर्थान्तरम्||५||

tatra vyādhirāmayō gada ātaṅkō yakṣmā jvarō vikārō rōga ityanarthāntaram||5||

tatra vyAdhirAmayo gada Ata~gko yakShmA jvaro vikAro roga ityanarthAntaram||5||

Vyadhi, amaya, gada, atanka, yakshma, jwara, vikara and roga are synonyms of disease. [5]

#### *Means for knowledge of disease*

तस्योपलब्धिर्निदानपूर्वरूपलिङ्गोपशयसम्प्राप्तिः॥६॥

tasyōpalabdhirnidānapūrvavarūpaliṅgōpaśayasamprāptitah ||6||

tasyopalabdhirnidAnapUrvarUpali~ggopashayasamprAptitaH||6||

Diseases could be diagnosed by studying their nidana (etiology), poorvarupa (premonitory symptoms), linga (sign and symptoms), upashaya (pacifying factors) and samprapti (pathogenesis).[6]

#### *Definition of Nidana*

तत्र निदानं कारणमित्युक्तमग्रे॥७॥

tatra nidānam kāraṇamityuktamagrē ||7||

tatra nidAnaM kAraNamityuktamagre||7||

Nidana is the cause or etiological factor as described earlier. [7]

#### *Definition of Poorvarupa (premonitory signs)*

पूर्वरूपं प्रागुत्पत्ति लक्षणं व्याधैः॥८॥

pūrvarūparṁ prāgutpatti lakṣaṇam vyādhēḥ||8||

pUrvarUpaM prAgutpatti lakShaNaM vyAdheH||8||

Symptoms that manifest themselves before the appearance of the disease are known as poorvarupa. [8]

### *Definition of Linga (sign) and its synonyms*

प्रादुर्भूतलक्षणं पुनर्लिङ्गम् तत्र लिङ्गमाकृतिर्लक्षणं चिह्नं संस्थानं व्यञ्जनं रूपमित्यनर्थान्तरम् ॥९॥

prādurbhūtalakṣaṇam punarliṅgam tatra liṅgamākṛtirlakṣaṇam cihnaṁ saṁsthānam  
vyañjanam rūpamityanarthāntaram ||9||

prAdurbhUtalakShaNaM punarli~ggam| tatra li~ggamAkRutirlakShaNaM cihnaM  
saMsthAnaM vya~jjanAM rUpamityanarthAntaram||9||

Sign and symptoms when fully manifested are called as linga. *Linga, akruti, lakshana, chihna, samsthana, vyanjana* and *rupa* are synonyms of linga. [9]

### *Definition of Upashaya (pacifying factors)*

उपशयः पुनर्हेतुव्याधिविपरीतानां विपरीतार्थकारिणां चौषधाहारविहाराणामुपयोगः सुखानुबन्धः ॥१०॥

upaśayaḥ punarhētuvyādhiviparītānāṁ viparītārthakāriṇāṁ  
cauṣadhadhāhāravihārāṇāmupayogaḥ sukhānubandhaḥ ||10||

upashayaH punarhetuvyAdhiviparItAnAM viparItArthakAriNAM  
cauShadhAhAravihArANAmupayogaH sukhAnubandhaH||10||

Medicines, diets and regimens that bring about relief either by acting directly on the cause of a disease or the disease itself or by producing such effects indirectly are termed upashaya (pacifying factors). [10]

### *Samprapti (pathogenesis)*

#### *Definition*

सम्प्राप्तिर्जातिरागतिरित्यनर्थान्तरं व्याधेः ॥११॥

samprāptirjātirāgatirityanarthāntaram vyādhēḥ ||11||

samprAptirjAtirAgatirityanarthAntaraM vyAdheH||11||

*Jati* and *agati* are synonyms of Samprapti (pathogenesis) of the disease. Like *nidana* and *rupa*, samprapti has been described here with its synonyms which are indicative of its definition. [11]

#### *Types of samprapti (pathogenesis)*

सा सङ्ख्याप्राधान्यविधिविकल्पबलकालविशेषभिंद्यते ॥१२॥

sā saṅkhyāprādhānyavidhivikalpabalaṅkālaviśeṣairbhidyatē |12|

sA sa~gkhyAprAdhAnyavidhivikalpabalaKAlavisheShairbhidyate|12|

Samprapti can be further classified, depending upon certain specific characteristics, by *sankhya* (numerical classification), *pradhanya* (dominance of dosha), *vidhi* (types of

diseases), *vikalpa* (dominance of one or the other attributes of dosha), and *bala-kala vishesha* (the time of manifestation or aggravation of the disease). [12]

#### *Samkhya samprapti (numerical classification)*

सङ्ख्या तावद्यथा- अष्टौ ज्वराः, पञ्च गुल्माः, सप्त कुष्ठान्येवमादिः|१२|

saṅkhyā tāvadyathā-aṣṭau jvarāḥ, pañca gulmāḥ, sapta kuṣṭhānyēvamādih|12|

sa~gkhyA tAvadyathA-aShTau jwaraH, pa~jca gulmAH, sapta kuShThAnyevamAdiH|12|

*Sankhya* type of classification of *samprapti* numerically groups diseases by their pathogenesis, such as, eight types of *jwara*(fever), five types of *gulma* (abdominal lump), seven types of *kushtha* (skin diseases), etc. [12.1].

#### *Pradhanya samprapti (Classification on dominance)*

प्राधान्यं पुनर्दोषाणां तरतमाभ्यामुपलभ्यते तत्र द्वयोस्तराः, त्रिषु तम इति|१२|

prādhānyam punardōṣāṇāṁ taratamābhyaṁupalabhyatē| tatra dvayostaraḥ, triṣu tama iti |12|

prAdhAnyAM punardoShANAM taratamAbhyAmupalabhyate| tatra dvayostaraH, triShu tama iti|12|

*Pradhanya* (dominance) indicates the dominance or primacy of one particular dosha above other dosha. If two dosha get vitiated, the comparative term *tara* is used to indicate the predominant one. If, all the three dosha get vitiated then the superlative term *tama* is used to indicate the most predominant one. [12.2]

#### *Vidhi samprapti (Classification on prognosis)*

विधीर्नाम- द्विविधा व्याधयो निजागन्तुभेदेन, त्रिविधास्त्रिदोषभेदेन, चतुर्विधाः  
साध्यासाद्यमृदुदारुणभेदेन|१२|

vidhīrnāma- dvividhā vyādhayō nijāgantubhēdēna, trividhāstridōṣabhēdēna, caturvidhāḥ  
sādhyāsādhyamṛduḍāruṇabhēdēna|12|

vidhīrnAma- dvividhAvyAdhayonijAgantubhedena, trividhAstridoShabhedena,  
caturvidhAH sAdhyAsAdhyamRuduAruNabhedena|12|

Diseases are of two varieties - *nija* (endogenous) or *agantu* (exogenous). On the basis of vitiation of the *doshas*, diseases could be of three types; they could also be of four varieties, viz. *sadhyā* (curable), *asadhyā* (incurable), *mrudu* (mild), and *daruna* (severe). [12.3]

#### *Vikalpa samprapti (pathogenesis on fraction of dosha)*

समवेतानां पुनर्दोषाणामशांशबलविकल्पो विकल्पोऽस्मिन्नर्थे|१२|

samavētānāṁ [1] punardōṣāṇāmśāṁśabalavikalpō vikalpō'sminnarthē|12|

samavetAnAM punardoShANAmA MshAM shabalavikalpo vikalpo~asminnarthe|12|

Predominance of one or the other attribute of the three dosha (in the manifestation of the disease) is known as *vikalpa* here. [12.4]

*Bala Kala* (*time of aggravation*) *samprapti*

बलकालविशेषः पुनर्व्याधीनामृत्वहोरात्राहारकालविधिविनियतो भवति॥१२॥

balakālaviśeṣah punarvyādhīnāmr̥tvahōrātrāhārakālavidhviniyatō bhavati||12||

balakAlavisheShaH punarvyAdhInAmRutvahorAtrAhArakAlavidhviniyato bhavati||12||

Specific time of aggravation and manifestation of diseases is determined on the basis of the variations in seasons, time of the day (or night), and intake of food. [12.5]

तस्माद्व्याधीन् भिषगनुपहतसत्त्वबुद्धिर्हत्वादिभिर्भावैर्यथावदनुबुद्ध्येत्॥१३॥

tasmādvyanādhīn

bhiṣaganupahatasattvabuddhirhētvādibhirbhāvairyathāvadanubuddhyēta||13||

tasmAdvYAdhIn

bhiShaganupahatasattvabuddhirhetvAdibhirbhAvairyathAvadanubuddhyeta||13||

On the basis of these factors, physicians should properly diagnose a disease without any affliction in mind and intellect (i.e., without any prejudice or preconceived ideas). [13]

इत्यर्थसङ्ग्रहो निदानस्थानस्योदृदिष्टो भवति तं विस्तरेणोपदिशन्तो  
भूयस्तरमतोऽनुव्याख्यास्यामः॥१४॥

ityarthasaṅgrahō nidānasthānasyōddiṣṭō bhavati| tam vistarēṇopadiśantō  
bhūyastaramatō'nuvākhyāsyāmaḥ||14||

ityarthasa~ggraho nidAnasthAnasyoddiShTo bhavati| taM vistareNopadishanto  
bhUyastaramato~anuvyAkhyAsyAmaH||14||

In brief, the above topics are the objectives of this section ‘Diagnosis of diseases’ (Nidana Sthana). They will again be discussed in detail later in this chapter. [14]

## Knowledge of Jwara (fever)

*Origin*

तत्र प्रथमत एव तावदाद्याँल्लोभाभिद्रोहकोपप्रभवानष्टौ व्याधीनिदानपूर्वेण क्रमेण व्याख्यास्यामः, तथा सूत्रसङ्ग्रहमात्रं चिकित्सायाः। चिकित्सितेषु चोतरकालं यथोपचितविकाराननुव्याख्यास्यामः ||१५||

tatra prathamata ēva tāvadādyāmः॥lobhābhidrōhakōpaprabhavānaṣṭau  
vyādhīnnidānapūrvēṇa kramēṇa vyākhyāsyāmaḥ, tathā sūtrasaṅgrahamātram  
cikitsāyāḥ। cikitsitēṣu [1] cōttarakālaṁ yathōpacitavikārānanuvyākhyāsyāmaḥ [2] ||15||

tatra prathamata eva tAvadAdyAmllobhAbhidrohakopaprabhavAnaShTau  
vyAdhInnidAnapUrveNa krameNa vyAkhyAsyAmaH, tathA sUtrasa~ggrahamAtraM  
cikitsAyAH| cikitsiteShu cottarakAlaM yathopacitavikArAnanuvyAkhyAsyAmaH||15||

First described here are the diagnostic features of eight diseases caused due to greed, malice and anger. These would be described along with brief methods of their treatment (a detailed description of their management would be provided in Chikitsa Sthana (of this treatise)). [15]

इह खलु ज्वर एवादौ विकाराणामुपदिश्यते, तत्प्रथमत्वाच्छारीराणाम्॥१६॥

iha khalu jwara evādau vikārāṇāmupadiśyate, tatprathamatvācchārīrāṇām॥16॥

iha khalu jvara evAdau vikArANAmupadishyate, tatprathamatvAcchArIrANAm॥16॥

*Jwara* (fever) is described first among disorders because temperature (or body heat) is a life-sustaining force, and is the first condition (afflicting patients of somatic conditions). [16]

### *Types*

अथ खल्वष्टाभ्यः कारणेभ्यो ज्वरः सञ्जायते मनष्याणां; तद्यथा- वातात्, पित्तात्, कफात्,  
वातपित्ताभ्यां, वातकफाभ्यां, पित्तकफाभ्यां, वातपित्तकफेभ्यः, आगन्तोरष्टमात् कारणात्॥१७॥

atha khalvaṣṭābhyaḥ kāraṇebhyo jwaraḥ sañjāyate manusyāṇām; tadyathā- vātāt, pittāt,  
kaphāt, vātapiṭṭābhyaṁ, vātakaphābhyaṁ, pittakaphābhyaṁ, vātapiṭṭakaphēbhyaḥ,  
āgantoraṣṭamāt kāraṇāt॥17॥

atha khalvaShTAbhyaH kAraNebhyo jvaraH sa~jjAyate manuShyANAM; tadyathA-  
vAtAt, pittAt, kaphAt, vAtapiṭṭAbhyAM, vAtakaphAbhyAM,  
pittakaphAbhyAM,vAtapiṭṭakaphēbhyaH, AgantoraShTamAt kAraNAt॥17॥

*Jwara* occurs in humans due to eight causative factors, - *vata*, *pitta*, *kapha*, *vata-pitta*,  
*vata-kapha*, *pitta-kapha*, *vata-pitta-kapha*, and *agantu* (exogenous causes). [17]

तस्य निदानपूर्वरूपलिङ्गोपशयविशेषाननुव्याख्यास्याम्॥१८॥

tasya nidānapūrvarūpaliṅgopaśayaviśeṣānanuvyākhyāsyāmaḥ ||18||

tasya nidAnapUrvarUpali~ggopashayavisheShAnanuvyAkhyAsyAmaH [1] ||18||

Now I shall expound the specific *nidana* (etiology), *poorvarupa* (prodromal symptoms), *rupa* (symptoms) and *upashaya* (pacifying factors) of *jwara*. [18]

### *Vata dominant jwara*

#### *Causes*

रुक्षतंघुशीतवमनविरेचनास्थापनशिरोविरेचनातियोगव्यायामवेगसन्धारणानशनाभिघातव्यवायोद्वेगशो  
कशोर्णितातिषेकजागरणविषमशरीरन्यासेभ्योऽतिसेवितेभ्यो वायुः प्रकोपमापद्यते॥१९॥

rūkṣalaghushītavamanavirecanāsthāpanaśirovirecanātiyogavyāyāmavegasandhāraṇāna  
śanābhīghātavyavāyodvegaśokaśonitātiśekajāgarāṇaviśamaśarīranyā  
sebhyotisevitebhyo vāyuḥ prakopamāpadyate||19||

rUkShalaghushItavamanavirecanAsthApanashirovirecanAtiyogavyAyAmavegasandhAr  
aNAnashanAbhighAta-vyavAyodvegashokashoNitAtiShekajAgaraNaviShamasharIrrany  
Asebhyo~atisevitebhyo vAyuH prakopamApadyate||19||

Excess use of rough, light to digest, and cold (food), over administration of therapeutic emesis and therapeutic purgation, *asthapana* (non-unctuous enema), *shirovirechana* (head evacuation), overexertion, suppression of urges, *anashana* (fasting), injury, copulation, agitation, lamentation, excessive blood-letting, night vigils and improper/odd posture of body – cause vitiation of *vayu* [19]

### Pathogenesis

स यदा प्रकुपितः प्रविश्यामाशयमष्मणा सह मिश्रीभूयाद्यमाहारपरिणामधातुं रसनामानमन्ववेत्य  
रसस्वेदवहानि स्रोतांसि पिधायाग्निमुपहत्य पक्तिस्थानादूष्माणं बहिर्निरस्ये केवलं शरीरमनुप्रपद्यते,  
तदा ज्वरमभिनिर्वर्तयति॥२०॥

sa yadā prakupitah praviśyāmāśayamūṣmaṇā saha  
miśrībhūyādyamāhārapariṇāmadhātumrasanāmānamanvavetya rasasvedavahāni  
srōtāṁsi pidhāyāgnimupahaty paktisthānādūṣmāṇam bahirnirasya kevalam  
śarīramanuprapadyate, tadā jwaramabhinirvartayati ||20||

sa yadA prakupitaH pravishyAmAshayamUShmaNA [2] saha  
mishrlbhUyAdyamAhArapariNAmadhAtuM rasanAmAnamanvavetya rasasvedavahAni  
srotAMsipidhAyAgnimupahaty paktisthAnAdUShmAñNaM bahirnirasya kevalaM  
sharIramanuprapadyate, tadA jvaramabhinirvartayati||20||

This vitiated *vayu*, when it gets into the *amashaya* (stomach), afflicts *agni* and vitiates the first *dhatu* (*rasa*) created through this vitiated digestion process. This (vitiated admixture of *vayu* and *rasa*) blocks the channels associated with *rasa* and *sweda* (sweat), adversely affecting the digestive processes and moving that heat out of its locus into other parts of the body. This excess heat leads to *jwara*. [20]

### Clinical features

तस्येमानि लिङ्गानि भवन्ति; तद्यथा- विषमारम्भविसर्गित्वम्, ऊष्मणो वैषम्यं,  
तीक्रतनुभावानवस्थानानि ज्वरस्य, जरणान्ते दिवसान्ते निशान्ते घर्मान्ते वा  
ज्वरस्याभ्यागमनमभिवृद्धिर्वा, विशेषेण परुषारुणवर्णत्वं नखनयनवदनमूत्रपुरीष्टवचामत्यर्थ  
क्लृप्तीभावश्च; अनेकविधोपमाश्चलाचलाश्च वेदनास्तेषां तेषामङ्गावयवानां; तद्यथा- पादयोः सुप्तता,  
पिण्डकयोरुद्वेष्टनं, जानुनोः केवलानां च सन्धीनां विश्लेषणम्, ऊर्वाः सादः,  
कटीपाश्वर्पष्ठस्कन्धबाह्वसोरसां च भग्नरुणमदितमथितचटितावपाटितावनन्न-त्वमिव  
हन्वोश्चाप्रसिदधिः, स्वनश्च कर्णयोः, शङ्खयोर्निस्तोदः, कषायास्यता आस्यवैरस्यं वा,  
मुखतालुकण्ठशोषः, पिपासा, हृदयग्रहः, शुष्ककर्षिदिः, शुष्ककासः, क्षवथूदगारविनिग्रहः, अन्नरसखेदः,  
प्रसेकारचकाविपाकाः, विषादजूम्भाविना-मवेपथुश्रमभ्रमप्रलापप्रजागररौमहर्षदन्तहर्षाः, उष्णाभिप्रायता,  
निदानोक्तानाम-नुपशयो विपर्णीतोपशयश्चेति वातज्वरस्य लिङ्गानि भवन्ति॥२१॥

tasyemāni liṅgāni bhavanti; tadyathā-viśamārambhavisargitvai, ūśmaṇo vaisamyam, tīvratanubhāvānavasthānāni jwarasya, jarāṇante divasānte niśānte gharmānte vā jwarasyābhyaṅgamanamabhvīṛddhīrvā, viśeṣena paruśārunavarnatvam nakhanayanavadanamūtra-purīṣatvacāmatyarthāi kṛptībhāvaśca; anekavidhopamāśc-alācalāśca vēdanāstesāi teśāmaṅgāvayavānāṁ; tadyathā-pādayoḥ suptatā, piṇḍikayorudvēṣṭanaī, jānunoḥ kevalānāī ca sandhīnāī viśleṣanaī, ūrvoḥ sādah, kaṭipārśvapṛṣṭhaskandhabhāvāṁsorasāi ca bhagnarugñamṛditamathitacaṭītāvapāṭītāvanunnatvamivahanoścāprasiddhiḥ, svanaśca karṇayoh, śaṅkhayornistodah, kaśāyāsyatā ḥsyavairasyaī vā, mukhatālukanṭhaśosah, pipāsā, hṛdayagrahah, śuṣkacchardiḥ, śuṣkakāsaḥ, kṣavathūdgāravinigrahah, annarasakhedah, prasekārocakā-vipākāḥ, viśādajṛmbhāvināmavepathuśramabhrāmapralāpapra-jāgararomaharṣadantaharṣāḥ, uṣṇābhiprāyatā, nidānoktānām-anupaśayo viparītopaśayaśceti vātajwarasya liṅgāni bhavanti ||21||

tasyemAni li~ggAni bhavanti; tadyathA- viShamArambhavisargitvam, UShmaNo vaiShamyAM, tlvratanubhAvAnavasthAnAni jvarasya, jarāNAnte divasAnte nishAntegharmAnte vA jvarasyAbhyAgamanamabhvīṛddhīrvA, visheSheNa paruShAruNavaNatvaM nakhanayanavadanamUtrapurlShatvacAmatyarthāM kīRuptlbhAvashca;anekavidhopamAshcalAcalAshca vedanAsteShAM teShAma~ggAvayavAnAM; tadyathA- pAdayoH suptatA, piNDikayorudveShTanaM, jAnunoH kevalAnAM casandhInAM vishleShaNam, UrvoH sAdaH, kaTlpArshvapRuShThaskandhabAhvaMsorasAM ca bhagnarugNamRuditamathitacaṭītāvapāṭītāvanunnatvamiva [6] ,havoshcAprasiddhiH, svanashca karNayoH, sha~gkhayornistodaH, kaShAyAsyatA AsyavairasyaM vA, mukhatAlukaNThashoShaH, pipAsA, hRudayagrahaH,shuShkacchardiH, shuShkakAsaH, kShavathUdgAravinigrahaH, annarasakhedaH, prasekArocakAvipAkAH,viShAdajRumbhAvinAmavepathuśramabhrāmapralApaprājAg araromaharShadantaharShAH, uShNAbhiprAyatA, nidAnoktAnAmanupashayo viparītopashayashcetivAtajwarasya [7] li~ggAni bhavanti||21||

The patient would experience abrupt onset and remission (of fever), with variations in temperature and severity. *Jwara* would be particularly severe at the end of digestion and there would be temporal variations as well (i.e., day, night and in summer). The patient's skin would appear rough, and there would be reddish discoloration of nails, eyes, face, urine, stool and skin. The patient would experience excessively reduced tendency to pass urine, feces, excessive tearing of nails, etc. Debilitating pain radiating from the toe up, with various sensations felt at various parts as the pain travels – numbness in feet, cramps in the calves, looseness in knee joints (and also in all other joints), weakness in thighs, excruciating pain in the waist region, aching in the sides, pressure sensation in back, churning in shoulder, cutting in arms, extracting in scapular region and constricting feeling in chest, inability to move the jaws, tinnitus, and piercing pain (pricking pain) in the temple region. (Other symptoms include) astringent taste or lack of taste in the mouth (distaste), dryness of mouth, palate and throat, thirst, catching pain

(grabbing pain) in the heart, dry vomiting, dry cough, loss of sneezing and eructation, aversion to the taste, salivation, anorexia, diminished digestive power, malaise, increased yawning, bending, shivering, exhaustion, giddiness, delirium, insomnia, horripilation, sensitivity in teeth, and the desire for hot. Factors mentioned in the etiology are alleviating and contrary to them are aggravating. [21]

### *Pitta dominant jwara*

#### Causes

उष्णाम्ललवणक्षारकटुकाजीर्णभोजनेभ्योऽतिसेवितेभ्यस्तथा  
तीक्ष्णातपाग्निसन्तापश्रमक्रोधविषमाहारेभ्यश्च पितं प्रकोपमापद्यते॥२२॥

uṣṇāmlalavaṇakṣārakaṭukājīrṇabhojanebhyotisevitebhystathā  
tīkṣṇātapaagnisantāpaśramakrodhvīṣamāhārebhyaśca pittam̄ prakopamāpadyate॥२२॥

uShNAmlalavaNakShArakaTukAjlNabhojanebhyo~atisevitebhystathA  
tlkShNAtapAgnisantApashramakrodhvShamAhArebhyaShca  
pittaMprakopamApadyate॥२२॥

Excess use of hot, sour, salty, alkali, pungent and bitter food and intake of meals before the digestion of the previous meal, contact with intense heat, fire, exhaustion due to excessive exercise, anger, untimely meals – vitiate *pitta*.[22]

#### Pathogenesis

तद्यदा प्रकुपितमामाशयादूषमाणमुपसृज्याद्यमाहारपरिणामधातुं रसनामानमन्वेत्य रसस्वेदवहानि स्रोतांसि पिंधाय द्रवत्वादग्निमुपहत्य पक्तिस्थानादूषमाणं बहिनिरस्य प्रपीडयत् केवलं शरीरमनुप्रपद्यते, तदा ज्वरमभिनिर्वर्तयति॥२३॥

tadyadā prakupitamāśayādūṣmāṇamupasṛjyādyamāhāra-parināmadhātum  
rasanāmānamanavavetya rasasvedavahāni srotāṁsi pidhāya dravatvādagnimupahatyā  
paktisthānādūṣ-māṇāi bahirnirasya prapīḍayat kevalā śarīramanu-prapadyate, tadā  
jwaramabhinirvartayati॥२३॥

tadyadA prakupitamAmAshayAdUShmA NamupasRujyAdyamAhArapariNAmadhAtuM  
[1] rasanAmAnamanvavetya rasasvedavahAni srotAMsi  
pidhAyadravatvAdagnimupahatyā paktisthAnAdUShmA NaM bahirnirasya [2] prapIDayat  
kevalaM sharIramanuprapadyate, tadA jvaramabhinirvartayati॥२३॥

The vitiated *pitta* enters the *amashaya* and gets mixed with the initial *dhatu* formed in the process, *rasa*, along with the digested food. This improperly formed *rasa* causes sluggish circulation and further block the micro channels of *rasa* and *sweda*. The core digestive *agni* gets displaced out of its original site (*pakti sthana*), spreading out through the body. Due to blocked channels of sweat, heat dissipation is adversely affected, causing the temperature to rise all over the body and manifest as *paitika jwara*.[23]

## Clinical features

तस्येमानि लिङ्गानि भवन्ति; तदयथा- यगपदेव केवले शरीरे ज्वरस्याभ्यागमनमभिवृद्धिर्वा भुक्तस्य विदाहकाले मध्यन्दिने ईर्धरात्रे शरदि वा विशेषेण, कटुकास्यता, घाणमुखकण्ठौष्ठतालपाकः, तुष्णा, मदो, अमो, मर्च्छा, पित्तच्छ्रद्धनम्, अतीसारः, अनन्दवेषः, सदनं, खेदः, प्रलापः, रक्तकोठाभेनिर्वृत्तिः शरीरे, हरितहारैद्रत्वं नखनयनवदनमूत्रपुरीष्ट्वचाम्, अत्यर्थमूष्मणस्तीव्रभावः, अतिमात्रं दाहः, शीताभिप्रायता, निदानोक्तानुपशयो विपरीतोपशयेश्चेति पित्तज्वरलिङ्गानि भवन्ति॥२४॥

tasyemāni liṅgāni bhavanti; tadyathā- yugapadeva kevale śarīre  
jwarasyabhyagamanamabhivéddhirvā bhuktasya vidāhakāle madhyandinerdharātre  
śaradi vā višeṣeṇa, kaṭukāsyatā, ghrāṇamukhakanṭhauṣṭhatālupākah, ṭṛṣṇā, mado,  
bhramo, mūrcchā, pittacchardanaī, atīsārah, annadvēṣah, sadanam, khedaḥ, pralāpah,  
raktakoṭhābhinirvṛttiḥ śarīre, haritahāridrat-varṇ nakhanayanavadanamūtrapurīṣatvacāī,  
atyarthamūṣmaṇ-astīvrabhāvah, atimātrām dāhah, śītābhiprāyatā, nidānoktānupaśayo  
viparītopaśayaśceti pittajwaraliṅgāni bhavanti॥२४॥

tasyemAni li~ggAni bhavanti; tadyathA- yugapadeva kevale sharIre  
jvarasyAbhyAgamanamabhivRuddhirvA bhuktasya vidAhakAle  
madhyandine~ardharAtre sharadivA visheSheNa, kaTukAsyatA,  
ghrANamukhakaNThauShThatAlupAkaH, tRuShNA, mado, bhramo, mUrcchA,  
pittacchardanam, atIsAraH, annadveShaH, sadanaM,khedaH, pralApaH,  
raktakoThAbhinirvRuttiH sharIre, haritahAridratvaM  
nakhanayanavadanamUtrapurIShatvacAm, atyarthamUShmaNastIvrabhAvaH,  
atimAtraMdAhaH, shItAbhiprAyatA, nidAnoktAnupashayo viparItopashayashceti  
pittajvarali~ggAni [3] bhavanti॥२४॥

The symptoms of this type of *jwara* include simultaneous high fever in the whole body, specially at the time during digestion of meals, midday, middle of the night or in the Autumn season. This type of fever leaves a pungent taste in the mouth, *paka* (ulceration or inflammation) of the nose, mouth, throat, lips and palate, unquenchable thirst, narcosis, giddiness, fainting, vomiting of *pitta* (bile), *atisara* (diarrhea), aversion to food, malaise, dejection, delirium, appearance of reddish patches in the body, green or yellow coloration in nails, eyes, mouth, urine, feces and skin, excessive migraine and burning sensation, desire for cold things, unsuitability of included factors in etiology and suitability of opposite ones – these symptoms are of *pitta* (or *paittika*) *jwara*. [22-24]

### Kapha dominant jwara

#### Causes

स्निग्धगुरुमधुरपिच्छिलशीताम्ललवणदिवास्वप्नहर्षाव्यायामेभ्योऽतिसेवितेभ्यः श्लेष्मा  
प्रकोपमापद्यते॥२५॥

snigdhagurumadhurapicchilaśītāmlalavaṇadivāsvapnaharṣāvyāyāmebhyo 'tisēvitebhyah  
śleṣmā prakōpamāpadyate ||25||

snigdhagurumadhurapicchilashItAmlalavaNadivAsvapnaharShAvyAyAmebhyo~atisevite  
bhyah shleShmA prakopamApadyate||25||

Excessive use of unctuous, heavy, sweet, slimy, cold, sour, salty substances, day sleep, joy and a sedentary lifestyle –vitiate *sleshma* or *kapha*. [25]

### Pathogenesis

स यदा प्रकुपितः प्रविश्यामाशयमष्मणा सह मिश्रीभूयाद्यमाहारपरिणामधातुं रसनामानमन्ववेत्य  
रसस्वेदवहानि स्रोतांसि पिधायाग्निमपहत्य पक्तिस्थानादूष्माणं बहिर्निरस्य प्रपीडयन् केवलं  
शरीरमनुप्रपद्यते, तदा ज्वरमभिनिवैर्तयति॥२६॥

sa yadā prakupitah pravīsyāmāśayamūṣmaṇā saha miśrībh-  
ūyādyamāhārapariṇāmadhātuī rasanāmānamanvavetya rasa-svedavahāni srotāṁsi  
pidhāyāgnimupahatya paktisthānādūṣ-māṇaī bahrinirasya prapīḍayan kevalaī  
śarīramanupra-padyate, tadā jwaramabhinirvartayati॥२६॥

sa yadA prakupitaH pravishyAmAshayamUShmaNA  
sahamishrlbhUyAdyamAhArapariNAmadhAtuM rasanAmAnamanvavetya  
rasasvedavahAni srotAMsipidhAyAgnimupahatya paktisthAnAdUShmAName  
bahrinirasya prapIDayan kevalaM sharīramanuprapadyate, tadA  
jvaramabhinirvartayati॥२६॥

The vitiated *kapha* enters the *amashaya* and gets mixed with the initial *dhatu* formed in the process, *rasa*, along with the digested food. This improperly formed *rasa* cause sluggish circulation and further block the micro channels of *rasa* and *sweda*. The core digestive *agni* gets displaced out of its original site (*pakti sthana*), spreading out through the body. As channels of sweat are blocked and are unable to dissipate the heat, temperature rises all over the body, causing *jwara*. [26]

### Clinical features

तस्येमानि लिङ्गानि भवन्ति; तदयथा- युगपदेव केवले शरीरे ज्वरस्याभ्यागमनमभिवृद्धिर्वा भक्तमात्रे  
पूर्वाह्ने पूर्वरात्रे वसन्तकाले वा विशेषेण, गुरुगात्रत्वम्, अनन्नाभिलाषः, १लेष्मप्रसेकः, मुखमाधुर्यं,  
हूल्लासः, हृदयोपलेपः, स्तिमितत्वं, छर्दिः, मृद्वग्निता, निद्राधिक्यं, स्तम्भः, तन्द्रा, कासः, श्वासः,  
प्रतिश्यायः, शैत्यं, शैत्यं च नखनयनवदनमूत्रपरीष्टवचाम्, अत्यर्थं च शीतपिडका भूशमङ्गेभ्य  
उत्तिष्ठन्ति, उष्णाभिप्रायता, निदानोक्तानुपूर्षयौ विपरीतोपशयश्च; इति(१लेष्मज्वरलिङ्गानि  
भवन्ति)॥२७॥

tasyemāni liṅgāni bhavanti; tadyathā-yugapadeva kevale śarīre  
Jwarasyābhyāgamanamabhivṛddhivṛā bhuktamātre pūrvāhne pūrvvarātre vasantakāle vā  
višeṣena,gurugātratvam,anannābhilāṣah,śleṣmaprasekaḥ,mukhamādhuryam,hṛllāṣah,hṛdayopalepaḥ,stimitatvam,chardiḥ,mṛdvagnitā,nidrādhikyam,stambhaḥ,tandrā,kāṣaḥ,  
śvāṣaḥ,pratiśyāyah,śaityam,śaityam ca nakhanayanavadanamūtrapurīṣatvacām,  
atyartham ca śītapiḍakā bhṛśamaṅgebhya uttiṣṭhanti, uṣṇābhiprāyata,  
nidānoktānupaśayo viparītopaśayaśca; iti (śleṣmajwaraliṅgāni bhavanti)॥२७॥

tasyemAni li~ggAni bhavanti; tadyathA- yugapadeva kevale sharIre  
jvarasyAbhyAgamanamabhivRuddhivRA bhuktamAtre pUrvAhNe pUrvarAtre  
vasantakAle vAvisheSheNa, gurugAtrtvam, anannAbhilAShaH, shleShmaprasekaH,  
mukhamAdhuryaM, hRullAsaH, hRudayopalepaH, stimitatvam, chardiH,

mRudvagnitA,nidrAdhikyaM, stambhaH, tandrA, kAsaH, shvAsaH, pratishyAyaH, shaityaM, shvaityaM ca nakhanayanavadanamUtrapuriShatvacAm, atyartham ca shItapiDakAbhRushama~ggebhya [2] uttiShThanti, uShNAbhiprAyatA, nidAnoktAnupashayo viparItopashayashca; iti (shleShmajvarali~ggAni [3] bhavanti)||27||

The symptoms of *shleshmaja (kaphaja) jwara* include the simultaneous onset of mild fever in the whole body, specially just after meals, forenoon, early night or spring season. This type of fever causes heaviness in the body, less desire to eat, excess secretion of *shleshma* (phlegm), sweet taste in the mouth, nausea, coating in the heart (causing wheezing), vomiting, mild appetite, excessive sleep or narcolepsy, stiffness, drowsiness, cough, dyspnea, coryza, coldness, whiteness in nails, eyes, face, urine and skin, urticarial patches in the body, desire to be subjected to heat, unsuitability of the described etiological factors and suitability of opposite to them. [27]

### *Sannipatika jwara*

#### Causes

विषमाशनाठनशनादन्नपरिवर्तादृतव्यापत्तेरसात्म्यगन्धोपघ्राणाद् विषोपहतस्य चोदकस्योपयोगाद् गरेभ्यो  
गिरीणां चोपश्लेषात् स्वेदवमनविरेचनास्थापनानुवासनशिरोविरेचनानामयथावत्प्रयोगात्  
मिथ्यासंसर्जनादवा स्त्रीणां च विषमप्रजननात् प्रजातानां च मिथ्योपचारादयथोक्तानां च हेतूनां  
मिश्रीभावादयथानिदानं द्वन्द्वानामन्यतमः सर्वं वा त्रयो दोषा युगपत् प्रकोपमापद्यन्ते, ते  
प्रकुपितास्त्यैवानुपूर्व्या ज्वरमभिनिर्वर्तयन्ति॥२८॥

viṣamāśanādānaśanādānnaparivartādṛtuvyāpatterasātmyagandhopaghṛāñādvīṣopahata  
syacodakasyopayogādgarebhyo girīñāṁ copaśleṣāt  
snehasvedavamanavirecanāsthāpanānuvāsanaśirovirecanānāmayathāvatprayogāt  
mithyāsaṁsarjanādvā strīñāṁ ca viṣamaprajananāt prajātānāṁ ca  
mithyopacārādyathoktānāṁ ca hetūnāṁ miśrībhāvādyathānidānāṁ  
dvandvānāmanyatamāḥ sarve vā trayodoṣā yugapat prakopamāpadyante, te  
prakupitāstayaivānupūrvyājwaramabhinirvartayanti ||28||

viShamAshanAdanashanAdannaparivartAdRutuvyApatterasAtmyagandhopaghriNAAdvi  
Shopahatasya codakasyopayogAdgarebhyo girINAM  
copashleShAtsnehasvedavamanavirecanAsthApanAnuvAsanashirovirecanAnAmayath  
AvatprayogAt mithyAsaMsarjanAdvA strINAM ca viShamaprajananAt prajAtAnAM  
camithyopacArAd yathoktAnAM ca hetUnAM mishrlbhAvAdyathAnidAnaM  
dvandvAnAmanyatamaH sarve vA trayo doShA yugapat prakopamApadyante,  
teprakupitAstayaivAnupUrvyA jvaramabhinirvartayanti||28||

Irregular diet, fasting, change in regular meals, seasonal derangement, unsuitable odors, use of hilly water full of poisonous sediments, improper medication by ghee, oils and fats, medical fomentations, emesis, purgation, oily or decoction enema, nasal instillations, faulty diets after purification therapies, women undergoing abnormal delivery and inappropriate post-partum management - these are some of the etiological factors that have already been mentioned as causes of vitiation of *doshas*, that cause fever. [28]

### *Clinical features*

तत्र तथोक्तानां ज्वरलिङ्गानां मिश्रीभावविशेषदर्शनाद् वान्द्रिकिमन्यतमं ज्वरं सान्निपातिकं वा विद्यात्॥२९॥

Tatra tathoktānāṁ jwaraliṅgānāṁ miśrībhāvavisaṁadarśanāddvāndvikamanyatamam Jwaram sānnipātikam vā vidyāt ||29||

tatra tathoktAnAM jvarali~ggAnAM  
mishrlbhAvavisheShadarshanAddvAndvikamanyatamaM jvaraM sAnnipAtikaM vA  
vidyAt||29||

When the symptoms exhibit the dominance of two *doshas*, it is called *sansrishta* (*dwandaja*) *jwara* and in case all three *doshas* are vitiated, it is called *sannipatika jwara* (tridoshic fever). [29]

### *Agantu jwara (Exogenous fever)*

अभिघाताभिषङ्गाभिचाराभिशापेभ्य आगन्तुर्हि व्यथापूर्वोष्टमो ज्वरो भवति। स किञ्चित्कालमागन्तुः केवलो भूत्वा पश्चाददोषैरनबद्धयते। तत्राभिघातजो वायुना दुष्टशोणिताधिष्ठानेन, अभिषङ्गजः पुनर्वातपित्ताभ्याम्, अभिचाराभिशापजौ तु सन्निपातेनानुबद्धयेते॥३०॥

abhighātābhiṣaṅgābhicārābhīśāpebhya āganturhi vyathāpūrvo ḍṭamo jwaro bhavati. Sa kiñcitkālamāgantuḥ kevalo bhūtvā paścāddoṣairanubadhyate. Tatrābhighātajovāyunā duṣṭaśonitādhīṣṭhānena, abhiṣaṅgajah punarvātapiṭṭābhyaī, abhicārābhīśāpajau tu sannipātenānubadhyete||30||

bhighAtAbhiSha~ggAbhicArAbhishApebhya Aganturhi vyathApUrvo~aShTamo jvaro bhavatiḥ sa ki~jcitkAlamAgantuH kevalo bhUtvA pashcAddoShairanubadhyate| tatrAbhighAtajo vAyunA duShTashoNitAdhiShThAnena, abhiSha~ggajaH punarvAtapiṭṭAbhyAm, abhicArAbhishApajau tu sannipAtenAnubadhyete||30||

*Agantuja jwara (jwara caused due to exogenous factors)* is the eighth type of fever. This fever is accompanied with pain and is often caused by trauma, association with evil, fascination, and wrath (of the wise and the elders). These causes directly manifest as fever without any prodromal symptoms for a transitional duration. Slowly, with the passage of time, *doshas* get vitiated and their effects manifest as above. Fevers caused due to trauma influence blood pathology, while association with evil afflicts *vata* and *pitta*, and fascination and wrath causes *sannipata* (and therefore, leads to an incurable condition). [30]

### *Specification of each type of jwara*

स सप्तविधाज्ज्वराद् विशिष्टलिङ्गोपक्रमसमुत्थानत्वाद् विशिष्टो वेदितव्यः, कर्मणा साधारणेन चोपचर्यते इत्यष्टविधा ज्वरप्रकृतिरुक्ता॥३१॥

sasaptavidhājjvarādvīśiṣṭalīṅgopakramasamutthānatvādvīśiṣṭo veditavyah,karmanĀ āsādhāraṇena copacaryate.ltyaṣṭavidhā jwaraprakṛtiruktā||31||

sa saptavidhAjjvarAdvishiShTali~ggopakramasamutthAnatvAdvishiShTo veditavyaH,  
karmaNA sAdhAraNena copacaryate [1] | ityaShTavidhA jvaraprakRutiruktA||31||

All the seven doshic *jwara* have their own doshic specifications with respect to the onset, symptomatology, and treatment principles. The exception is the *agantuja jwara* (exogenous), which should be treated with appropriate consideration to the *jwara*'s specific etiology. [31]

#### *Specific feature and classification of jwara*

ज्वरस्त्वेकएवसन्तापलक्षणः। तमेवाभिप्रायविशेषाद् द्विविधमाचक्षते, निजागन्तुविशेषाच्च। तत्र निजं  
द्विविधं त्रिविधं चतुर्विधं सप्तविधं चाहुर्भिषजो वातादिविकल्पात्॥३२॥

Jwarastveka evasantāpalakṣaṇaḥ. Tamevābhīprāyavīśeṣād dvividhamācakṣate, nijāgantu  
viśeṣācca. Tatra nijaṁ dvividhaṁ trividhaṁ caturvidhaṁ saptavidhaṁ cāhurbhiṣajo  
vatādivikalpāt||32||

jvarastveka eva santApalakShaNaH| tamevAbhiprAyavisheShAddvividhamAcakShate,  
nijAgantuvisheShAcca| tatra nijaM dvividhaM trividhaM caturvidhaM saptavidhaM  
cAhurbhiShajo vAtAdivikalpAt||32||

Per doshic classification of *jwara*, *santapa* (excessively hot sensation) is of only one type common to all *jwara*. But according to other classifications it is of two types - *nija* (endogenous) and *agantuja* (exogenous). *Nija* again could be classified into two types (*saumya* or mild) and *agneya* (high grade fever)), three types (*vatika*, *paitika*, *shleshmika*), four types (*vatika*, *paitika*, *sleshmika* and *agantuja*), or seven types (*vatika*, *paitika*, *shleshmika*, *vata-paitika*, *vata-shleshmika*, *pitta-shleshmika*). [32]

#### *General premonitory features of all jwara*

तस्येमानि पूर्वरूपाणि भवन्ति; तदयथा-मुखवैरस्यं, गुरुगात्रत्वम्, अनन्नाभिलाषः,  
चक्षुषोराकुलत्वम्, अश्वागमनं, निद्राधिक्यम्, अरतिः, जृम्भा, विनामः,  
वेपथः, श्रमभ्रमप्रलापजागरणरोमहर्षदन्तहर्षः, शब्दशीतवातातपसहत्वासहत्वम्, अरोचकाविपाकौ,  
दौर्बल्यम्, अड्गमर्दः, सदनम्, अल्पप्राणता, दीर्घसूत्रता, आलस्यम्, उचितस्य कर्मणो हानिः, प्रतीपता  
स्वकार्येषु, गुरुणां वाक्येष्वभ्यस्या, बालेभ्यः प्रद्रवेषः, स्वधर्मेष्वचिन्ता,  
माल्यानलेपनभोजनपरिक्लेशनं, मधुरेभ्य भक्षेभ्यः प्रद्रवेषः, अम्ललवणकटुकप्रियता च, इति ज्वरस्य  
पूर्वरूपाणि भवन्ति प्राक्सन्तात् अपिचैनं सन्तापार्तमनुबानिः॥३३॥

tasyemāni pūrvarūpāṇi bhavanti; tadyathā- mukhavairasyam, gurugātratvam,  
anannābhilāṣah, cakṣuṣorākulatvam, aśrvāgamanam, nidrādhikyam, aratih, jṛmbhā,  
vināmaḥ, vepathuh, śramabhrāmapralāpajāgarāṇamaharṣadantaharṣah,  
śabdaśītātātapasahatvāsahatvam, arocakāvipākau, daurbalyam, aṅgamardah,  
sadānam, alpaprāṇatā, dīrghasūtratā, ālasyam, uciṭasya karmaṇo hāniḥ, pratīpatā  
svakāryēṣu, gurūṇām vākyevabhyasūyā, bālebhyaḥ  
pradvesah, svadharmeṣvacintā, mālyānulēpanabh-ojanaparikleśanam, madhurebhyaśca  
bhakṣebhyah pradvesah, amlalavaṇākāṭukapriyatā ca, iti jwārasya pūrvarūpāṇi  
bhavantiprāksantāpāt; api cainam santāpārtamanubadhnanti॥33॥

tasyemAni pUrvarUpANi bhavanti; tadyathA- mukhavairasyaM, gurugAtratvam, anannAbhilAShaH, cakShuShorAkulatvam, ashrvAgamanaM, nidrAdhikyam, aratiH,jRumbhA, vinAmaH, vepathuH, shramabhraramapralApajAgaraNaromaharShadantaharShAH, shabdashItavAtAtapasahatvAsahatvam, arocakAvipAkau, daurbalyam,a~ggamardaH, sadanam, alpaprANatA, dlrgasUtratA, Alasyam, ucitasya karmaNo hAniH, pratIpatA svakAryeShu, gurlUNAM vAkyeShvabhyasUyA, bAlebhyahpradveShaH, svadharmeShvacintA, mAlyAnulepanabhojanaparikleshanaM, madhurebhyashca bhakShebhyah pradveShaH, amlalavaNakaTukapriyatA ca, iti jvarasyapUrvapUrvANi bhavanti prAksantApAt; api cainaM santApArtamanubadhnanti||33||

Premonitory features of *jwara* include abnormal taste in the mouth, heaviness in the body, aversion to food, restless eyes, lacrimation, excessive sleep, restlessness body, yawning, bending, shivering, exhaustion (without exercise), giddiness, delirium, sometimes sleeplessness, horripilation, oversensitive teeth, tolerance and intolerance to sound, cold, wind and heat, anorexia, indigestion, weakness, body-ache, malaise, reduced vitality, mental agitations, lethargic, idleness, lack of natural activities, apathy to daily regimen, disrespect to the words of elders, agitation with children, aversion to doing work, uncomfortable with flowers and perfumes, aversion to sweet edibles, and desirous for sour, salty and pungent things. These premonitory symptoms rise before the onset of *jwara* and may continue through the course of the fever. [33]

इत्येतान्यैकैकशो ज्वरलिङ्गानि व्याख्यातानि भवन्ति विस्तरसमासाभ्याम्॥३४॥

ityetānyekaikaśo Jwaraliṅgāni vyākhyātāni bhavanti vistarasamāsābhyaṁ||34||

ityetAnyekaikasho jvarali~ggAni vyAkhyAtAni bhavanti vistarasamAsAbhyAm||34||

Thus the symptoms of separate single doshic *jwara* are described in details and double and triple doshic *jwara* are described in brief [34].

### *Consequences of jwara*

ज्वरस्त खलु महेश्वरकोपप्रभवः, सर्वप्राणभूतां  
प्राणहरोऽदेहोन्द्रियमनस्तापकरः, प्रजाबलवर्णहर्षोत्साहहासकरः, श्रमक्लममोहाहारोपरोधसञ्जननः;  
ज्वरयति शरीराणीति ज्वरः, नान्ये व्याधयस्तथा दारुणा बहूपद्रवा दुश्चिकित्स्याश्च यथायम्। स  
सर्वरोगाधिपतिः, नानातिर्यग्योनिष च बहविधैः शब्दैरभिधीयेते। सर्वे प्राणभूतः सज्वरा एव जायन्ते  
सज्वरा एव म्रियन्ते च; स महामोहः, तेनौभिभूताः प्राग्दैहिकं देहिनः कर्म किञ्चिदपि न स्मरन्ति,  
सर्वप्राणभूतां च ज्वर एवान्ते प्राणानादते॥३५॥

JwarastukhaluMaheśvarakopaprabhavaḥ,sarvaprāṇabhṛtāṁprāṇaharo,dehendriyamana stāpakarah,prajñābalavarnaharṣotsāhahrāsakarahśramaklamamohā hāroparodhasañjananah; jwarayati śarīrāṇīti jwarah, nānye vyādhayastathā dāruṇā bahūpadravā duścikitsyāśca yathāyam. Sa sarvarogādhipatiḥ, nānātiryagyoniṣu ca bahuvidhaiḥ śabdairabhidhīyate.Sarve prāṇabhṛtaḥ sajvarā eva jāyante sajvarā eva mriyante ca; sa mahāmohah, tenābhibhūtāḥ prāgdaihikam dehinah karma kiñcidapi na smaranti, sarvaprāṇabhṛtāṁ ca jwara evānte prāṇānādatte॥35॥

jvarastu khalu maheshvarakopaprabhavaH, sarvaprANabhRutAM prANaharo, dehendriyamanastApakaraH, praj~jAbalavarNaharShotsAhahrAsakaraH [1] ,shramaklamamohAh Aroparodhasa~jjananaH; jvarayati sharIrANiti jvaraH, nAnye vyAdhayastathA dArUNA bahUpadraV A dushcikitsyAshca yathA~ayam| sa sarvarogAdhipatiH, nAnAtiryagyoniShu ca bahuvidhaiH shabdairabhidhlyate| sarve prANabhRutaH sajvarA eva jAyante sajvarA eva mriyante ca; sa mahAmohaH, tenAbhibhUtAH prAgdaihikaM dehinaH karma ki~jcidiapi na smaranti,sarvaprANabhRutAM ca jvara evAnte prANAnAdatte||35||

*Jwara* occurs due to the wrath of Maheshwara. It could take away the life of all creatures, causes *santapa* (grief) in body, sense organs and mind. It reduces intellect, strength, complexion, feeling of happiness and enthusiasm and produces tiredness, fatigue, confusion, aversion to food. In fact, it is called *jwara* because it produces unhealthy effect in the body. No other disease is as frightful, complicated and difficult in treatment as this. That is why it is considered the king of all diseases. It is considered a life-giving force, since all living beings are born with fever (body temperature) and die with fever. It causes delirium. Afflicted living beings lose their memory of any event of their previous lives. In the end fever takes away the life of all creatures. [35]

#### *Principles of management of jwara*

तत्र पूर्वरूपदर्शने ज्वरादौ वा हितं लघवशनमपतर्पणं वा,  
ज्वरस्यामाशयसमुत्थत्वात् ततः कषायपानाभ्युडगस्नेहस्वेदप्रदेहपरिषेकानुलेपनवमनविरेचनास्थापनानुवासनोपशमननस्तः कर्म-धूपधूमपानाऽजनक्षीरभोजनविधानं च यथास्वं युक्त्या प्रयोज्यम्॥३६॥

tatra pūrvarūpadarśane jwarādau vā hitam laghvaśanamapatarpanam  
vā, jwarasyāmāśayasamutthatvāt; tataḥ  
kaśāyapānābhyaṅgasnehasvedapradehapariṣekānulepanavamanavirecanāsthāpanānu  
vāsanopaśamananastahkarmadhūpadhūmapānāñjanakṣīrabhojanavidhānam ca  
yathāsvam yuktyā prayojyam||36||

tatra pUrvarUpadarshane jvarAdau vA hitaM laghvashanamapatarpaNaM vA,  
jvarasyAmAshayasamutthatvAt;  
tataHkaShAyapAnAbhya<sub>ggasnehasvedapradehapariShekAnulepanavamanavirecanAsthApanAnuvAsanopashamana-nastaHkarm  
adhUpadhUmapAnAjjjanakShIrbhojanavidhAnaM</sub> ca yathAsvaM yuktyA prayojyam||36||

When premonitory symptoms manifest or at the onset of the fever, dieting or fasting is useful because the disease originates from the *amashaya*. In such a case, intake of kashaya (decoctions), massage, oleation (snehana), fomentation (swedana), thick ointment (pradeha), sprinkling (parisheka), anulepana (anointing with pastes), emesis, purgation, decoction and oily enema, pacification measures, nasal errhines, fumigation, medicated smoking, collyrium, medicated milk and a specific dietetic regimen should be indicated as per the condition. [36]

### *Management principles of jeerna jwara (chronic fever)*

जीर्णज्वरेषु तु सर्वष्वेव सर्पिषः पानं प्रशस्यते यथास्वौषधसिद्धस्य; सर्पिर्हि स्नेहाद्वातं शमयति, संस्कारात् कफ, शैत्यात् पित्तमूष्माणं च; तस्माज्जीर्णज्वरेषु सर्वष्वेव सर्पिर्हितमुदकमिवाग्निप्लुष्टेषु द्रव्येष्विति॥३७॥

भवन्ति चात्र- यथा प्रज्वलितं वेशम परिषिञ्चन्ति वारिणा| नराः शान्तिमभिप्रेत्य तथा जीर्णज्वरे घृतम्॥३८॥

स्नेहाद्वातं शमयति, शैत्यात् पित्तं नियच्छति| घृतं तुल्यगुणं दोषं संस्कारात् जयेत् कफम्॥३९॥

नान्यः स्नेहस्तथा कश्चित् संस्कारमनुवर्तते| यथा सर्पिरतः सर्पिः सर्वस्नेहोत्तमं मतम्॥४०॥

Jírnajwarešu tu sarveṣveva sarpiṣah pānam praśasyate yathāsvauṣadhasiddhasya;  
sarpirhi snehādvātam śamayati,samśkārāt kaphām,śaityāt pittamūṣmāṇam  
ca;tasmājjírnajwarešu sarveṣveva sarpirhitamudakamivāgniplus̄teṣu dravyeṣviti॥37॥

Bhavanti cātra- yathā prajvalitam veśma pariṣiñcanti vāriṇā. narāḥ śāntimabhipretya  
tathā jīrnajware ghṛtaī॥38॥

snehādvātam śamayati, śaityāt pittam niyacchatil ghṛtam tulyaguṇam dōṣam  
samśkārāttu jayet kaphāi॥39॥

nānyāḥ snehastathā kaścit- samśkāramanuvartate| yathā sarpirataḥ sarpiḥ  
sarvasnehottamam matam॥40॥

jIrnajvareShu tu sarveShveva sarpiShaH pAnaM prashasyate  
yathAsvauShadhasiddhasya; sarpirhi snehAdvAtaM shamayati, saMskArAt kaphaM,  
shaityAtpittamUShmANaM ca; tasmAjjIrnajvareShu sarveShveva  
sarpirhitamudakamivAgnipluShTeShu dravyeShviti॥37॥

bhavanti cAtra- yathA prajvalitaM veshma pariShi~jcanti vAriNA| narAH  
shAntimabhipretya tathA jIrnajvare ghRutam॥38॥

snehAdvAtaM shamayati, shaityAt pittaM niyacchatil ghRutaM tulyaguNaM doShaM  
saMskArAttu jayet kapham॥39॥

nAnyAH snehastathA kashcit saMskAramanuvartate| yathA sarpirataH sarpiH  
sarvasnehottamaM matam॥40॥

In all types of *jirna jwara* (chronic fever), internal use of medicated ghee prepared is recommended. Medicated ghee pacifies *vata* by its unctuousness, *kapha* by (ghee infused with) *kapha* pacifying drugs, and *pitta* by its coldness. Therefore, ghee is useful in all forms of *jirna jwara* like fire subsides with water. [37]

Here are (the verses) –

As water is sprinkled on burning houses to douse (the fire), ghee is administered to manage chronic fever. No other *sneha* (oil etc.) brings the refinement properties of

*sanskara* (processing with drugs) as ghee and therefore it is said the best one of all the *snehas*. [38-40]

#### *Rule of exception for repetition of text*

गद्योक्तो यः पुनः श्लोकैरर्थः समनुगीयते| तदव्यक्तिव्यवसायार्थं द्विरुक्तं तन्न गर्ह्यते||४१||

Gadyokto yaH punaH ślokairarthah samanugīyate. tadvyaktivyavasāyārthaṁ dviruktam  
tanna garhyate||41||

gadyokto yaH punaH shlokairarthaH samanuglyate| tadvyaktivyavasAyArthaM  
dviruktaM tanna garhyate||41||

This subject of *jwara* has been put here in prose and is again put into the form of verses. The intention is to make the subject clear and understandable. Such repetitions should not be dismissed in disgust. [41]

#### *Summary*

तत्र श्लोकाः-

त्रिविधं नामपर्यायैर्हेतुं पञ्चविधं गदम्| गदलक्षणपर्यायान् व्याधे: पञ्चविधं ग्रहम्||४२||

ज्वरमष्टविधं तस्य प्रकृष्टासन्नकारणम्| पूर्वरूपं च रूपं च भेषजं सङ्ग्रहेण च||४३||

व्याजहार ज्वरस्याग्रे निदाने विगतज्वरः| भगवानग्निवेशाय प्रणताय पुनर्वसुः||४४||

Tatra ślōkāḥ- trividhaṁ nāmaparyāyairhetum pañcavidhaṁ gadam.  
gadalakṣaṇaparyāyān vyādheḥ pañcavidhaṁ graham||42||

jwaramaṣṭavidham tasya prakṛṣṭāsannakāraṇam. pūrvarūpaṁ ca rūpaṁ ca bheṣajam  
saṅgrahēna ca||43||

vyājahāra jwarasyāgre nidāne vigatajwaraḥ. bhagavānagniveśāya praṇatāya  
punarvasuh||44||

tatra shlokAH- trividhaM nAmaparyAyairhetuM pa~jcavidhaM gadam|  
gadalakShaNaparyAyAn vyAdheH pa~jcavidhaM graham||42||

jvaramaShTavidhaM tasya prakRuShTAsannakAraNam| pUrvarUpaM ca rUpaM ca  
bheShajaM sa~ggraheNa ca||43||

vyAjahAra jvarasyAgre nidAne vigatajvaraH| bhagavAnagniveshAya praNatAya  
punarvasuH||44||

To summarize,

Three types of *nidana* of *jwara*, along with their synonyms, five types of diseases, symptoms and synonyms of diseases, five means to know the diseases, eight types of fever, its distant and immediate causes, premonitory symptoms, symptoms and

medicament in short – all these were expounded by Lord Punarvasu (Atreya) to Agnivesha in this first chapter on the diagnosis of *jwara*. [42-44]

Thus ends the first chapter on diagnosis of fever in Nidana Sthana in the treatise composed by Agnivesha and reducted by Charak. (1)

## Tattva Vimarsha (Fundamental principles)

- The causative factors, favorable conditions, dominant factors, and origins of *jwara* are important in the context of *nidana*. [3]
- Somatic diseases could be caused due to *soma (kapha)*, *agni (pitta)*, and *vayu (vata)* – due to vitiation of single *dosha*, two *doshas*, or all three *doshas*. Psychiatric diseases are attributed to vitiation of *rajas* and *tamas*. [4]
- A disease can be seen clinically as a consequence of toxins inside the body, and could be defined as that which inflicts fear, hampers quality of life, manifests with many signs, decreases life, affects the senses, cause pain, and makes life hard. [5]
- The five key factors of *jwara nidana* that provide a complete view of a disease are etiology, premonitory signs, clinical features, pacifying factors, and pathogenesis. [6]
- An ability to understand and observe unmanifested or premonitory signs is important to prevent the progression of a disease. [8]
- The signs of a disease could take the form of a cardinal feature, a structural lesion, marks, or a systemic disorder. [9]
- Pacification factors include diets, medications, and lifestyle regimen that help provide relief and comfort to the patient and are considered to be among the means to diagnose a disease. [10]
- The pathogenesis of a disease includes numerical classification, types of diseases, knowledge of a dominant factor, and temporal factors (aggravation time and season).
- *Jwara* is the primary change observed in body that initiates a disease process. [16]
- All forms of *jwara* are caused due to vitiation of dosha, which in turn have various causative factors (for their vitiation). [17]
- The important pathological events in process of *jwara* are as below:
  - Vitiated *doshas* get accumulated in the *amashaya* i.e. site of first phase of digestion
  - Next, these *doshas* mix with the undigested food material, in that heated environment, in the *amashaya*, vitiating the *ahara rasa* (just digested food)
  - This vitiated *rasa* blocks the *rasavaha* and *swedavaha strotas* (channels) that regulate body heat.

Consequently, there is an affliction of the digestion process and spreading of heat outside its natural location, causing a rise in body temperature [19-28]

- Exogenous factors may cause *jwara* by vitiating *rakta* (blood), and/or *dosha*. [30]
- Rise in temperature is a confirmative sign of *jwara*. [32]
- The light to digest diet and reduction therapy shall be started as soon as premonitory signs of *jwara* are observed. [36]
- The best advocated medicine for chronic *jwara* is Ghee due to its therapeutic efficacy of pacifying all three *dosha*. [37]

## Vidhi Vimarsha (Applied Inferences)

Treatment of any disease is possible only after the proper knowledge of causative factors and sign and symptoms. Treatment principles described in Nidana Sthana should be incorporated in the *upashaya* (pacification factors). *Nidana* means the causative factor of the diseases. The term *vyadhibodhakam* means the diagnosis of diseases with the help of *nidana*, *poorvarupa*, *rupa*, *upashaya* and *samprapti*. 1-2 [6]

If diseases are not properly known, one cannot start the treatment. Therefore, *Nidanapanchaka* (the five factors associated with understanding an affliction) is described as the specific measures to diagnose the disease. [Cha.Sa.Nidana Sthana 1/6]

Vagbhata also endorsed these five components as the means of understanding the disease. [6] [8]

Several types of classifications of *Nidana* are as under:

### A. First Classification

There are four types of *Nidana*:

1. ***Sannikrishta*** (immediate causative factor): Immediate factors that cause affliction of a disease in a short span of time and do not require to wait for the different stages of *doshaprakopa* like *chaya* etc., are known as *sannikrishta*. Such factors do not require any help of other causative factors to produce the disease, though it is not an independent agent either.
2. ***Viprakrishta*** (delayed/ chronic causative factor): These factors do not cause the disease in a short span of time. These causative factors have to wait for increased, gradual accumulation of *doshas* to get strength. A threshold, once reached, triggers the onset of the disease. The example of this is the accumulation of *kapha dosha* during *Hemanta ritu* (early winter season), causing diseases seen in *Vasanta ritu* (spring season). *Sannikrishta* factors tend to use this foundation prepared by *viprakrishta* factors. As the diseases are immediately seen after the consumption of *Sannikrishta* factors, it gives the impression that the disease is caused only due to *Sannikrishta* factors. Thus, a disease cannot manifest independently by either *Viprakrishta* or *Sannikrishta* factors – it would require both.
3. ***Vyabhichari*** (weak causative factors or doubtful causative factors): These types of causative factors are weak and they may or may not be the etiological factors

responsible for the disease. These could be secondary factors that require some other factor to afflict the patient, or could become a primary factor if the time is favorable.

4. **Pradhanika** (primary causative factor): These types of causes are the definite causes of disease due to their own strength. For example, poisons, severe trauma, etc. are considered as *pradhanika hetu*.

#### *B. Second classification*

Per this classification, *nidana* could be of three types:

1. **Asatmyendriyartha Samyoga** (Abnormal contact of the *Indriyas*, i.e., sensory and motor organs): Excessive utilization, underutilization or improper utilization of sensory and motor organs with their objects is called as *Asatmyendriyartha Samyoga*.
2. **Prajnaparadha** (intellectual errors): The errors in one's *dhee* (intellect), *dhriti* (restraint) and *smriti* (memory) lead to improper activities. These result in improper activities of body, mind and speech leading to vitiation of *dosha*.
3. **Parinama** (changes in the timings and in age): Changes in weather conditions or climate could lead to changes in environment that cause disease. Also, as one ages, exposure to environmental elements could afflict a person adversely. These are collectively termed *parinama*.

These three types of *nidana* of diseases imply that everyone has to use his sensory and motor organs in a proper way for maintaining health. Also, one should try to understand his/her own body and mind and exercise restraint or moderation wherever required intellect for his health - with regards to his body, mind and speech. Similarly, one should always behave and act according to the season, environment (location, etc.) and one's age.

#### *C. Third classification*

Another classification is as follows:

1. **Doshahetu** – These causes are directly responsible for the vitiation of *doshas* and that particular vitiated *dosha* becomes the cause of the disease.
2. **Vyadhihetu** – Such specific causative factors are directly responsible for the specific type of diseases. E.g., the use of *sheetoshnaviparyaya* (using hot and cold things at same time repeatedly) is a specific cause of *kushtha* (skin disease).
3. **Ubbayahetu** – These causes are responsible for the vitiation of *doshas* as well as specific diseases e.g. continuous intake of sweets, unctuous and heavy diet is the cause of *kapha dushti* (*doshahetu*), as well as for *kapha dosha* dominant disorders (*vyadhihetu*) like *sthaulya* (obesity) and *madhumeha* (diabetes).

#### *D. Fourth classification*

This classification describes *nidana* to be of two types:

1. ***Utpadakahetu***: These are the direct and primary causes of diseases which do not require the support of any other causes like dietetic, behavioral, psychological, accident, poisons etc.
2. ***Vyanjakahetu*** – (The supportive causes of the diseases): These are the indirect causes of the diseases and become supportive to the *utpadaka hetu*. For example, the seasons, or time of the day (early morning, midday, evening, midnight) are the *vyanjakahetu* for various diseases.

#### *E.Fifth Classification*

This classification describes *nidana* to be of two types:

1. ***Bahyahetu*** (external causative factors): The causative factors like abnormal diet, activities and seasonal effects which create the disease are termed as *bahyahetu*.
2. ***Abhyantarahetu*** (Internal causative factors): Imbalance of the *dosha*, *dhatu* and *mala* along with psycho-sensory dysfunctions as well malfunctions of *agni* are termed as *abhyantarahetu*.

#### *F.Sixth Classification*

This classifies *nidana* into the following types:

1. ***Prakritahetu***: Natural aggravation of *doshas* in the respective seasons and age is called as *prakritahetu* which does not cause the disease alone but with the help of other aggravating factors may cause the disease.
2. ***Vaikritahetu***: If *doshas* are aggravated in the seasons other than their natural aggravation time and create the disease then they are termed as *vaikritahetu*. E.g. Aggravation of *pitta dosha* in *Vasanta* (spring) season. (natural aggravation time of *pitta dosha* is *Sharada ritu*.)<sup>298</sup>(7)

#### *Poorvarupa (premonitory signs)*

The earliest manifested symptoms (that are typically of less intensity) in any disease are termed as *poorvarupa* or prodromal symptoms of that disease. With time, some of these prodromal symptoms (*poorvarupas*) become more intense and become the primary symptoms (*rupa / lakshana*) of that disease. If all these prodromal symptoms become the main symptoms, then it indicates poor prognosis of the disease (i.e., the disease could be considered incurable or hardly curable). So, it is important that diseases do not show all the symptoms in their early stage, or a few of them should appear first with less intensity.

There are two types of *Poorvarupa*:

1. Incomplete manifestation of the symptoms before the appearance of the disease.

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<sup>298</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

2. *Poorvarupa* caused due to *doshadushyasammurchana* (interaction of vitiated *dosha* and *dushya*) that are different from the previous ones. e.g. feeling of hatred towards children or horripilation seen in *jwara*. These types of *poorvarupas* are not seen when the *jwara* is manifested completely. But if they are seen then the prognosis of the disease is *asadhyata* (incurable). These signs are symptomatic of the diseases to be seen in the near future and do not indicate *dosha* predominance in that disease.

In some acute diseases, the disease is presented directly with signs and symptoms. In these cases, the unmanifested form of the actual symptoms (*rupa*) described in the text should be treated as the *poorvarupa* of a disease. [Chakrapani on Cha.Sa.Nidana Sthana 1/8]

Vaghbata opines that *poorvarupa* are signs and symptoms that appear earlier to the actual disease, not specifically assignable to the *doshas* as they are mild (not clearly recognizable) and few in number. [A.H. Nidhana Sthana. 1/3] This is also substantiated in the Ashtanga Sangraha <sup>299</sup> Gangadhara, commentator of Charak Samhita, describes two types of *Poorvarupa*:

1. ***Samanya Poorvarupa*** (general premonitory features): These are the general symptoms of disease which appear before the manifestation of the disease but do not indicate affliction of *doshas*.
2. ***Vishesha Poorvarupa*** (specific premonitory features): These are the general symptoms of disease which manifest before the manifestation of the disease and indicate involvement of *doshas*.[Gangadhar on Cha.Sa.Nidana Sthana.1/5]

#### *Rupa (clinical signs and symptoms)*

*Rupa* indicates the specific characteristics of the disease as it progresses, such as the dominance of *doshas*, various stages viz., *ama* (immature), *pakva* (mature), etc. They however, do not include such other factors of diagnosis of the diseases like *nidana*, *upashaya* and *samprapti*.[Chakrapani on Cha.Sa.Nidana Sthana 1/9]

*Rupa* includes the following signs and symptoms:

1. Invariable symptoms of the diseases like hyperpyrexia.
2. Symptoms caused by the vitiation of *doshas* like irregularity in onset and relief of attacks which is characteristic feature of fever caused by the vitiation of *vata dosha*.
3. Symptoms indicative of specific stages of the diseases like those observed during *ama* (immature), *pakva* (mature), and *jeerna* (chronic) stage.
4. Symptoms arise due to the complication of the diseases indicating their incurability.

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<sup>299</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

## 5. Premonitory symptoms of the diseases.

In present context, different synonyms of *rupa* have the same meaning but at other places these terms may have different meanings, as follows:

- *Linga*: The *pratyatma lakshanas* (cardinal symptoms) of the disease are also known as *linga*. For example, copious amounts and high frequency of urine and turbidity of urine is *linga* of diabetes.
- *Akruti*: *Akruti* means the shape, posture or appearance of the face and body of the patient in the state of illness or health. This is also indicative of the *dosha* associated with the disease. E.g. the appearance of the knee-joint looks like the head of jackal in *Kroshtukashirsha*.
- *Lakshana*: *Lakshana* is the symptom felt by the patient only and physician can only know about it by asking to the patient. This is also called *atusasamvedya* (i.e., felt by the patient only). E.g. Heavinesss of head or abdomen, pain, constipation tingling sensation etc.
- *Chihna*: *Chihna* refers to the signs that could be observed by the physician and termed as *Vaidyasamvedya*. Specific disease has specific signs. E.g. *shwasakashtata* (dysponea), coughing, hiccup, swelling etc.
- *Samsthana*: the place of pathogenesis where sign and symptoms are prominently observable. In another context, it also means various bodily systems, such as respiratory system, CVS etc. E.g. *hridashula*, *karnashula*, *udarashula* etc.
- *Vyanjana*: These include the mixed state of the sign and symptoms.
- *Rupa*: could also mean the external appearance of the person which one could know during the inspection of the patient. E.g. pallor body indicative of *pandu* or *kamala*.

Hence, all these above synonyms quoted are indicative of such symptomatology which is scattered in different diseases. Any one term is not sufficient to define the *rupa* or *lakshana* entirely therefore these different terms have been collectively described here. [9]

## *Upashaya* (pacification):

*Upashaya* implies such factors that bring about happiness. It provides diagnostic aid for diseases which are otherwise difficult to diagnose. *Upashaya* is broadly divided in two groups:[Chakrapani on Cha.Sa.Nidana Sthana 1/10]

1. Drugs etc. that are antagonistic to the cause of the disease or the disease itself.
2. Drugs etc. that are not antagonistic either to the cause of the disease or to the disease itself but when employed, they actually alleviate the condition by counteracting either the disease or the cause of it.

In addition to *upashaya*, there is another factor viz. *anupashaya* (...) which also helps in the diagnosis of diseases. But this is included under *Nidana*, hence not separately mentioned here.

Classification of *upashaya*:

1. *Hetu viparita aushadha* (drugs antagonistic to the cause of the disease)
2. *Hetu viparita anna* (food which is antagonistic to the cause of the disease)
3. *Hetu viparita vihara* (regimen antagonistic to the cause of the disease)
4. *Vyadhi viparita aushadha* (drugs antagonistic to the disease itself)
5. *Vyadhi viparita anna* (food antagonistic to the disease)
6. *Vyadhi viparita vihara* (regimen antagonistic to the disease)
7. *Hetu-vyadhi viparita aushadha* (drugs antagonistic to the cause and disease)
8. *Hetu-vyadhi viparita anna* (food antagonistic to the cause and disease)
9. *Hetu-vyadhi viparita vihara* (regimen antagonistic to the cause and disease)
10. *Hetu viparitarthakari aushadha* (drugs which are working against the causative factors of the disease though not actually against)
11. *Hetu viparitarthakari anna* (food that acts contrary to the causative factors of the disease though not actually against)
12. *Hetu viparitarthakari vihara* (regimen which is working against the causative factors of the disease though not actually against)
13. *Vyadhi viparitarthakari aushadha* (drugs which are working against the disease though not actually against)
14. *Vyadhi viparitarthakari anna* (food which is working against the disease though not actually against)
15. *Vyadhi viparitarthakari vihara* (regimen which is working against the disease though not actually against)
16. *Hetu-vyadhi viparitarthakari aushadha* (drugs which seem to be working against the causative factors and the disease though not actually so; i.e., working as placebos)
17. *Hetu-vyadhi viparitarthakari anna* (food which is working against the causative factors and the disease though not actually, i.e., working as placebo)
18. *Hetu-vyadhi viparitarthakari vihara* (regimen which is working against the causative factors and the disease though not actually against.) [Chakrapani on Cha.Sa.Nidana Sthana 1/10]

Various examples of *upashaya*:

| Upashaya      | Aushadha   | Anna   | Vihar  |
|---------------|--|--|--|
| Hetu viparita | Usage of shunthi in sheeta kaphaja jwara due to its hotness. | Intake of meat juice in case of vata jwara and fatigue | Remaining awake at night in aggravation of kapha dosha |

| Upashaya                               | Aushadha   | Anna  | Vihar<br>due to day<br>sleeping   |
|--|--|---|---|
| Vyadhi viparita                        | Use of antidiarrheal drugs like Patha etc. in diarrhea   | Intake of food like masur etc. in diarrhoea due to its antidiarrheal property.                        | Pravahana improving downwards peristalsis is the treatment for udavarta rogi  |
| Hetu-vyadhi<br>viparita                | Usage of dashmoola qwath in case of vataja jwara due to its vatahara and shothhara property  | Usage of hot substances and antipyretic gruel against sheetotthajwara, which subsides cold and fever. | Night awakening etc. which brings roughness in case of tandra, which is the result of consumption of Slimy substances followed by day sleeping. |
| Hetu<br>viparitarthakari<br><br>dosha. | Usage of vrishya drugs like pippali, shunthi etc. in case of shukrakshaya due to intake of excess pungent substances.<br><br>Inducing fear to the patients who are suffering from vataja unmada. | Usage of food substances which are hot in pachyamana shoth caused due to pitta                        |   |
| Vyadhi<br>viparitarthakari             | Usage of emetic drugs like madanaphala in case of chardi (vomitting)   | Intake of milk in case of atisar, which induces purgation.  | Inducing vomiting by external support in case of chardi.  |
| Hetu-vyadhi<br>viparitarthakari        | Use of hot drugs like agaru dravya lepa in   | Usage of intoxicating alcohol against   | Swimming therapy advised in the form of   |

|          |   |   |  |
|----------|---|---|--|
| Upashaya | Aushadha<br>case of<br>agniplushta<br>dagdha (burn<br>due to fire). | Anna<br>alcoholism<br>induced due to<br>consumption of<br>excessive<br>alcohol. | Vihar<br>exercise in case<br>of vatavyadhi<br>manifested due<br>to excessive<br>exercise |
|----------|---|---|--|

Vaghbata defines upashaya as satmya (compatible). [A.H Nidana Sthana.1/6]

In nutshell, upashaya is the therapeutic test that is helpful in diagnosing the doubtful stages of different diseases. This is adopted during differential diagnoses of the disease. [10]

### *Samprapti (pathogenesis)*

*Samprapti* is a compound word meaning *samyak aapti prapti* i.e. complete manifestation of a disease or the stage where the disease could be understood well. This pathogenesis explains the pattern of disequilibrium of *dosha* interacting with body tissues and thus, gives a clearer picture of disease. This covers all the six stages (*chayaprakopadi*) of the disease as told by Sushruta and the physician gets a complete understanding of the *nidanas* (causes), *poorvarupas*, *rupas* and *upashayanupashaya* with the help of *samprapti*. Mostly patients come to physician when the process of *samprapti* is completed and at that time there may not be any existence of *nidanas* or *poorvarupas*.

*Jati* is a synonym of *samprapti* that indicates the *janan* (genesis) of the disease as explained above.

*Aagati*: Literally means the manifestation and remission of the disease. In this process of disease manifestation (*samprapti*), the physician gets the knowledge in the form of qualitative and quantitative progress of the disease. While the symptoms of a disease manifest completely after pathogenesis (*samprapti*), still for the purpose of diagnosis, the knowledge of *samprapti* is not as important as the knowledge of *linga* (symptoms). Hence *samprapti* is described at the end. [Chakrapani on Cha.Sa.Nidana Sthana 1/11]

Vaghbata has defined these synonyms as: “The process of manifestation of the disease, by the morbid *doshas* (humors) which are circulating all over the body, is known as *samprapti* or *jati* or *agati*. [A.H Nidana Sthana 1/8]<sup>300</sup> [11]

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<sup>300</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

In order to allay the apprehension of incomplete description of *samprapti* for each disease, the *samprapti* in general of all diseases is described here in this chapter.[Chakrapani on Cha.Sa.Nidana Sthana 1/11]

Vagbhata has not described *vidhi samprapti*. He has described only five kinds of *samprapti* i.e. *samkhya*, *vikalpa*, *pradhanya*, *bala* and *kala samprapti*. [A.H Nidana Sthana 1/9]<sup>301</sup> *Pradhanya samprapti* indicates the primacy of a *samprapti*. [A.H Nidana Sthana 1/10]<sup>302</sup> When a *dosha* gets vitiated and becomes a causative factor of a disease, it does not necessarily mean that all its attributes also get vitiated. Vitiation of *vata* for example may mean aggravation of its coldness, lightness or ununctuousness.

*Kala samprapti* means the type that is governed by seasonal variations. Aggravation/manifestation of *shleshmika/kaphaja* type of fever during winter season is the example of seasonal variation. Some Ayurveda practitioners attribute an extreme form of manifestation to deeds in the patient's past life, and define *vidhi samprapti* as an affliction attributed to such deeds. [Chakrapani on Cha.Sa.Nidana Sthana 1/11] The timing of disease manifestation shows variation in the *samprapti* or pathogenesis. This aspect of *samprapti* helps in clearly determining the specific characteristics of a disease.

Vagbhata describes that *bala samprapti* is important to assess the severity of disease. [A.H Nidana Sthana 1/11]<sup>303</sup> [12-5]

#### *Significance of knowledge of nidana*

1. Knowledge of causative factors plays an important role in the prognosis of diseases. A disease becomes more difficult to cure with the rise in number of causative factors responsible for the diseases. [Cha.Sa.Sutra Sthana 10/14]
2. *Nidanaparivarjana* i.e. avoiding the causative factors of disease is the key principle professed here for the management of diseases. So in the absence of knowledge of causative factors, the management of the diseases will become difficult. [Cha.Sa.Vimana Sthana 7/30]

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<sup>301</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

<sup>302</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

<sup>303</sup> Sushruta. Uttara Tantra, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. Sushruta Samhita. 8th ed. Varanasi: Chaukhamba Orientalia;2005.

3. Treatment of disease incorporates the use of drugs, food articles and regimen having opposite properties to that of causative factors which is not possible without knowledge of causative factors.
4. To treat the newly originated diseases, a physician should have the knowledge of the involved *doshas*, causative factors and the location of the disease.

#### *Significance of knowledge of poorvarupa*

1. Charak Samhita suggests specific modalities for treatment of a patient at this stage. E.g. Light food and *apatarpana* treatment should be given when premonitory signs of fever are seen.
2. Manifestation of all the premonitory signs indicates bad prognosis of the disease.
3. *Poorvarupa* has significant role in the differential diagnosis of the disease.

#### *Significance of knowledge of rupa*

1. It has the same importance as that of *nidana* and *poorvarupa* in the prognosis of diseases. Rise in number of *rupa* makes the disease difficult to cure.
2. *Rupa* denotes the complete manifestation of the disease along with its *dosha* predominance. The diseases can be treated in a proper way if one is having the knowledge of all the signs and symptoms and the *dosha* responsible for it.

#### *Significance of knowledge of upashaya*

1. Knowledge of *upashaya* is helpful in differential diagnosis of diseases.
2. It also helps in identifying the diseases which are not clearly manifested.

#### *Significance of knowledge of samprapti*

1. *Samprapti* provides the details of the diseases such as *dosha* predominance, predominance of one or the other fraction of the three *doshas*, specific time of aggravation, and manifestation of diseases which plays a pivotal role in the management of diseases.
2. The important role of a physician in the management of diseases is *sampraptibhang* i.e. to break the association of vitiated *dosha* and *dushya* (tissue that gets vitiated). This is not possible without proper knowledge of *samprapti*.

#### *Nidanapanchaka and shat kriyakala*

Sushruta described six stages of *dosha* vitiation and progression of disease known as *shat kriyakala* (periods of activity). They are as under:

- *Sanchaya* (accumulation): In this stage *dosha* undergo mild increase at their own site. This accumulation produces mild symptoms. If the person recognises these instincts and acts accordingly, the *doshas* can be brought to the normal condition without much effort. [Su.Sa.Sutra Sthana 21/18]<sup>304</sup>

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<sup>304</sup> Vaghbhata. Uttara Sthana, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. Ashtanga Hridayam. 1st ed. Varanasi: Krishnadas Academy;2000.

- *Prakopa* (aggravation): In this stage, *doshas* gets vitiated further at their own site and exhibit some specific symptoms. By suitable changes in daily routine one can overcome these conditions. [Su.Sa.Sutra Sthana 21/27]<sup>305</sup>
- *Prasara* (spreading): The status of *doshas* again increases further and *doshas* spread nearby sites and invade the sites of other *doshas* to produce symptoms. If the person continues to indulge in unhealthy food and regimen, then the disease progresses to the next stage. [Dalhana on Su.Sa.Sutra Sthana 21/32]<sup>306</sup>

During the first three stages, the unhealthy food and activities increases the *doshas* and produces mild abnormalities. These three stages can be co-related with *nidana* (*hetu*) of *nidanapanchaka*.

- *Sthanasantshraya* (localisation): The increased *doshas* start accumulating at certain other places and lead to their abnormalities, especially in the *srotasa*. It leads to four kinds of abnormal changes in *srotasa*. [Su.Sa.Sutra Sthana 21/36]
  - *Atipravritti* – Increased functioning of channels
  - *Sanga* – Obstruction, blockage of channels
  - *Sira-Granthis* – Abnormal growths in the channels
  - *Vimargagamana* – Movement of fluids in wrong direction

The site where these *doshas* lodge together to progress towards disease, is the site of origin of disease. This is the stage of actual commencement of the disease. It is characterized by manifestation of some moderate symptoms which indicate the forthcoming disease. These are known as *poorvarupa*. This stage can be co-related with *poorvarupa* of *nidanapanchaka*. [Dalhana on Su. Sa. Sutra Sthana 21/33]<sup>307</sup>

- *Vyakti* (manifestation): This is the stage of full manifestation of the disease with all its characteristic sign and symptoms. These sign and symptoms are known as *rupa*. This stage can be co-related with *rupa* of *nidanapanchaka*. [Dalhana on Su. Sa. Sutra Sthana 21/34]<sup>308</sup>
- *Bheda* (complication): In this stage, the abnormalities become more profound and irreversible in spite of the best treatment. Sometimes *upadrvas*

<sup>305</sup>

<sup>306</sup> extract sourced from

<http://cosbin2001.blogspot.com/2014/12/health-benefits-of-jaggery-or-gur.html>

<sup>307</sup> Shastri KN, Chaturvedi GN, Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shastri KN, Chaturvedi GN, Editors. Vidyotini Commentary Charak Samhita.1st ed. Varanasi: Chaukhamba Bharti Academy;2004.

<sup>308</sup> Shukla VD, Tripathi RD. Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shukla VD, Tripathi RD Vaidyamanorama Commentary Charak Samhita.1st ed. Delhi; Chaukhamba Sanskrit Pratisthana, 2002.

(complications) or *arishta lakshanas* (bad prognostic signs) can be seen in this stage. This stage also can be co-related with *rupa* of *nidanapanchaka*. [Dalhana on Su. Sa. Sutra Sthana 21/35]<sup>309</sup>

The abnormal changes taking place in the body after exposure to the causative factors up to the manifestation of the disease is called as *samprapti*. This includes progress of the disease from first to sixth *kriyakala*.

*Interrelation between nidanapanchaka and shatkriyakala*

Sr. No.

Shatkriyakala

Nidanapanchaka

1

Sanchaya

Hetu (Nidana)

SAMPRAPTI

↓

2

Prakopa

3

Prasara

4

Sthanasanshraya

Poorvarupa

5

Vyakti

Rupa, Upashaya

6

Bheda

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<sup>309</sup> Chandola HM, Bhatia S. Concept of Diabetes mellitus in Ayurveda and its treatment with certain indigenous drugs. AYU Int 2001;1:84-87.

*Shatkriyakala of Jwara as compared with pathogenesis of fever*

| Sr. No. | Shatkriyakala | Condition as per dosha  | In Fever  |
|---------|---------------|---|---|
|         | Sanchaya      | it is the stage of accumulation or the stage which represents the inceptive phase of the disease wherein the dosha are stated to have accumulated and stagnated in its own place instead of freely circulating as in its normal avastha or phase. | it is the pyrogen which may be exogenous (bacterial substance lipopolysaccharide (LPS) present on bacterial cell wall) or endogenous (cytokines, Interleukin-1 and Interleukin-6 etc). These pyrogens enter the body and activate the immune cells (antigen presenting cell) for the formation of cytokines and other factors or due to endogenous cause too activation of immune system takes place. |
|         | Prakopa       | In this stage dosha gets vitiated or aggravated or the dosha previously accumulated/ stagnated get swollen and  | Exogenous factors contain immunological protein called lipo-polysaccharide binding protein (LBP) which binds to LPS. The  |

| Sr. No. | Shatkriyakala | Condition as per dosha  | In Fever LBP-LPS complex then binds to the CD14 receptors of a nearby macrophage. It causes synthesis and release of various endogenous cytokines factors such as IL-1, IL-6, Tumour Necrosing Factor alpha (TNF $\alpha$ ).  |
|---------|---------------|---|---|
|         | Prasara       | The third phase signifies to spread which generally takes place with help of vata and rakta. Dosha are stated to spread over and extend to other parts of the body. | the cytokine factors are released into general circulation, where they migrate to the circumventricular organs of the brain due to easier absorption caused by the blood-brain barrier's reduced filtration action there. The |

| Sr. No. | Shatkriyakala  | Condition as per dosha   |  |
|---------|----------------|--|--|
|         |                | In Fever cytokine factors then bind with endothelial receptors on vessel walls, or interact with local microglial cells. When these cytokine factors bind, the arachidonic acid pathway is then activated. Prostaglandin E2 (PGE2) is released which is mediated by the enzymes phospholipase A2 (PLA2), cyclooxygenase -2 (COX-2), and prostaglandin E2 synthase. |  |
|         | sthanasanshram | It is prodromal phase or the phase of poorvarupa wherein disease is yet to be manifested fully. The excited dosha having extended to other parts of the body become localized and it marks the beginning of specific diseases  | PGE2 is the ultimate mediator of the febrile response. PGE2 acts on neurons in the preoptic area (POA) through the prostaglandin E receptor 3 (EP3). EP3-expressing neurons in the POA innervate the dorsomedial hypothalamus (DMH), the |

| Sr. No. | Shatkriyakala | Condition as per dosha   | In Fever   |
|---------|---------------|--|--|
|         |               | <p>pertaining to those sthan/ structures. It is also known as the stage of disease augmentation. Sthana samshraya means taking shelter in a place.</p> | <p>rostral raphe pallidus nucleus in the medulla oblongata (rRPa), and the paraventricular nucleus (PVN) of the hypothalamus. Fever signals sent to the DMH and rRPa lead to stimulation of the sympathetic output system, which evokes non-shivering thermo-genesis to produce body heat and skin vasoconstriction to decrease heat loss from the body surface. It is presumed that the innervations from the POA to the PVN mediates the neuroendocrine effects of fever through the pathway involving pituitary gland and various endocrine organs.</p> |
| Vyakti  |               | This stage may be stated to be that of   | the brain ultimately orchestrates  |

| Sr. No. | Shatkriyakala | Condition as per dosha<br>manifestation of the fully developed disease- the resultant dosha<br>dushya<br>samurchana                        | In Fever<br>heat effector mechanisms via the autonomic nervous system.<br>It causes increased heat production by increased muscle tone, shivering and hormones like epinephrine (adrenaline) and also prevents heat loss by way of vasoconstriction<br>. |
|---------|---------------|--|--|
|         | Bheda         | It is the stage in which the disease may become sub-acute and chronic or incurable. Different types or variant of disease gets manifested. | In case of fever signs like increased blood pressure, neck stiffness, headache, giddiness, unconsciousness etc are seen in this phase.   |

## Related Chapters

Jwara Chikitsa, Jwara

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## Raktapitta Nidana

### Nidana Sthana Chapter 2. Diagnosis and etiopathogenesis of Bleeding Disorders Abstract

This chapter deals with diagnosis of bleeding disorders (raktapitta) caused by an excess of pitta dosha vitiating blood tissue (rakta dhatu) in the body. This leads to capillary break-down causing hemorrhage from external openings like mouth, per rectum, nose, eyes, ears, urethra. Contributing factors that increase the probability of raktapitta include consumption of incompatible food substances, consuming certain meats with alcohol, butter milk with meat of animals etc. The regular exposure to dietary and lifestyle factors with hot (ushna) properties vitiates pitta dosha. This pitta dosha has the same color and smell as rakta dhatu, and blends seamlessly with it. Vitiated pitta dosha and increased rakta dhatu circulate in the channels and the resultant increased volume of the blood overflows from the bodily orifices. The pathogenesis, if associated with vitiated kapha dosha, leads to bleeding from upper orifices; whereas if it is associated with vitiated vata dosha, leads to bleeding from the lower orifices. The first condition is curable, and later is difficult to cure. If both kapha and vata are involved in the pathogenesis, then the complications arise and such conditions are incurable. Avoiding etiological factors enlisted in this chapter can delay the progression of hemorrhagic disorders. Therapeutic measures of emesis and purgation, conservative therapy with medicinal formulations and proper attention can improve the condition of patients of hemorrhagic disorders in varying degrees. Prodromal symptoms and complications are described in this chapter.

**Keywords:** Etiopathogenesis of raktapitta, bleeding disorders, epistaxis, hemorrhage, hematemesis, rectal bleeding.

## Introduction

The second chapter of the Nidana Sthana deals with disorders of rakta dhatu, just as the previous chapter on jwara focused on the rasa dhatu. Pitta is the primary cause of jwara resulting in elevated temperature. This can further lead to raktapitta. Thus it can be said that jwara is a cause of raktapitta, and an aggravated pitta is the cause of both jwara and raktapitta.

Bleeding disorders also include conditions where bleeding is not apparent. Hemorrhagic strokes, vessel diseases, and heart attacks cause internal bleeding and do not erupt through the skin or orifices. These are typically due to vascular and other events and not caused due to raktapitta. These disorders should be classified under avarana and disorders of vata dosha affecting vessels (siragata vata).

Raktapitta manifests through two broadly divided routes that correlate with the flow of dosha energies in the body: the upper tract and the lower tract. The upper tract includes the orifices of eyes, ear, nose, and mouth/throat. It is the route taken by the flow of

blood when the person has an abundance of kapha besides rakta and pitta. When there is an abundance of body vata with an interplay of rakta and pitta, raktapitta manifests through the lower tract as in hematuria and per rectal bleeding. When bleeding manifests through both the routes, it indicates the involvement of both the dosha, vata and kapha.

Raktapitta from the upper orifices is curable, while that from the lower orifices is considered palliable. Manifestation of bleeding from both the tracts is said to be incurable. Prompt preventive action is advocated to avoid progression to incurable stage.

## Sanskrit Text, Transliteration and English Translation

अथातोरक्तपित्तनिदानंव्याख्यास्यामः॥१॥

इतिहस्माहभगवानात्रेयः॥२॥

athātō raktapittanidānaṁ vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAto raktapittanidAnaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Raktapitta Nidana” (Diagnosis and etiopathogenesis of Bleeding Disorders). Thus said Lord Atreya.[1-2]

### Synonym of raktapitta

पितं यथाभूतं लोहितपित्तमिति सञ्जां लभते, तदव्याख्यास्यामः॥३॥

pittam yathābhūtam lōhitapittamiti sañjñām labhatē, tad [1] vyākhyāsyāmaḥ||3||

pittaM yathAbhUtaM lohitapittamiti sajjAM labhate, tad [1] vyAkhyAsyAmaH||3||

We shall also expound how Pitta dosha gets the term ‘Lohitapitta’. [3]

### Etiopathogenesis

यदा जन्तुर्यवकोद्दालककोरदूषप्रायाण्यन्नानि भडकते, भृशोष्णतीक्ष्णमपि चान्यदन्नजातं निष्पावमाषकलत्थसूपक्षारोपसंहितं, दधिदधिमण्डोदरिवत्कट्वराम्लकाज्जिकोपसेकं वा, वाराहमाहिषांविकमात्स्यगत्यपिशितं, पिण्याकपिण्डालुशुष्कशाकोपहितं, मूलकसर्षपलशुनकरञ्जशिग्रुमधुशिगु(खडयूष)

भूस्तृणसुमुखसुरसकठेरकगण्डीरकालमालकपर्णासक्षवकफणिज्ञकोपदंशं, सुरासौरीरत्षोदकमैरयमेदकमधूलकशुक्तकवलबदराम्लप्रायानपानं वा, पिष्टान्नोत्तरभ्यिष्ठम्; उष्णाभितप्तो वाऽतिमात्रमतिवेले वाऽमन्यः पैयः पिबति, पयसा सैमश्नाति रौहिणीकं काणेकपोतं वा सर्षपतैलक्षारसिदधं, कुलत्थपिण्याकजाम्बवलकुचपक्वैः शौकितकैर्वा सह क्षीरं बत्युष्णाभितप्तः तस्यैवमाचरतः पितं प्रेकोपमापद्यते, लोहितं चं स्वप्रमाणमतिवर्तते तस्मिन् प्रमाणातिवृते पितं प्रकुपितं

शरीरमनुसर्पद्यदेव यकृत्प्लीहप्रभवाणां लोहितवहानां च सोतसां लोहिताभिष्यन्दगुरुणि मुखान्यासादय प्रतिरुन्ध्यात् तदेव लोहितं दूषयति॥४॥

yadā janturyavakōddälakakōradūṣaprāyāṇyannāni bhuṅktē, bhṛśoṣṇatīkṣṇamapi cānyadannajātarām  
niśpāvamāṣakulatthasūpakṣārōpasamhitāṁ,dadhidadhimaṇḍōdaśvitkaṭvarāmlakāñjikōp  
asēkāṁ [2] vā, vārāhamāhiṣāvikamātsyagavyapiśitāṁ,  
piṇyākapiṇḍalūsuṣkaśākōpahitāṁ,mūlakasarṣapalaśunakarañjaśigrumadhuśigru(khaḍa  
yūṣa [3] )  
bhūṣṭrṇasumukhasurasakuṭhērakagaṇḍīrakālamālakaparnāsakṣavakaphanijjhakōpada  
ṁśāṁ,surāsauvīratuṣodakamairēyamēdakamadhūlakaśuktakuvalab adarāmlaprāyānu  
pānāṁ vā, piṣṭānnōttarabhūyiṣṭham; uṣṇābhitaptō vā'timātramativēlāṁ vā"marṇpayah  
pibati, payasā samaśnāti rauhiṇīkāṁ [4] , kāṇakapōtarāṁ vā sarṣapatailakṣārasiddhāṁ,  
kulatthapiṇyākajāmbavalakucapakvaiḥ śauktikairvā saha kṣīrampibatyuṣṇābhitaptah [5]  
; tasyaivamācarataḥ pittāṁ prakōpamāpadyatē, lōhitāṁ ca [6] svapramāṇamativartatē|  
tasmin pramāṇātivrttē pittāṁ prakupitāṁ śarīramanusarpadyadēva [7]  
yakṛtpīhaprabhavāṇāṁ lōhitavahānāṁ ca srōtasāṁ lōhitābhiṣyandagurūṇi  
mukhānyāsādyapratiṇdhyāt [8] tadēva [9] lōhitāṁ dūṣayati॥४॥

yadA janturyavakoddAlakakoradUShaprAyANyannAni bhu~gkte,  
bhRushoShNatIkShNamapi cAnyadannajAtaM  
niShpAvamAShakulatthasUpakShAropasaMhitaM,dadhidadhimaNDodashvitkaTvarAml  
akA~jjikopasekaM [2] vA, vArAhamAhiShAvikamAtsyagavyapishitaM,  
piNyAkapiNDAlushuShkashAkopahitaM,mUlakasarShapalashunakara~jjashigrumadhus  
higru(khaDayUsha  
[3])bhUstRuNasumukhasurasakuTherakagaNDIrkAlamAlakaparNASakShavakaphaNij  
hakopadaMshaM,surAsauvīratuShodakamaireyamedakamadhUlakas  
huktakuvalabadarAmlaprAyAnupAnaM vA, piShTAnnottarabhUyiShTham;  
uShNAabitapto vA<sub>atimAtramativelamvā</sub>a~amaM payaH pibati, payasA samashnAti rauhiNIkaM  
[4], kANakapotaM vA sarShapatailakShArasiddhaM,  
kulatthapiNyAkajAmbavalakucapakvaiH shauktikairvAsaha kShlraM  
pibatyuShNAabitaptaH [5] ; tasyaivamAcarataH pittaM prakopamApadyate, lohitaM ca  
[6] svapramANamativartatē| tasmin pramANAtivRutte pittaM prakupitaM  
sharīramanusarpadyadeva [7] yakRutplīhaprabhavANAM lōhitavahAnAM ca srotasAM  
lohitAbhiShyandagurUNimukhAnyAsAdya pratirundhyAt [8] tadēva [9] lōhitāM  
dUShayati॥४॥

When a person consumes a diet or food mainly of:

- Grains such as barley (yavaka), Kodo millet or *Paspalum scrobiculatum (uddalaka)*, and *Ditch Millet (koradusha)*, in excess quantities, with other food items that are hot (ushna) and sharply acting (tikshna) such as legumes of Dolichos lablab Linn. (nishpaava), black gram (masha), horse gram (kulaththa) and alkali (kshara) , or with curd, whey, buttermilk, sour buttermilk or sour gruel
- Meat of pig, buffalo, sheep, fish and cow
- Vegetables of oil cake (piṇyaka), pindalu (a tuber) and dried potherbs

- Upadamsha (chutney or salad) of radish (mulaka), mustard (sarshapa), garlic (lashuna), fruits of Indian beech tree (Pongamia Glabra) (karanja), drumsticks (*Moringa oleifera*) (shigru), its sweet variety (madhu shigru), muskmelon (kharabusa), lemongrass (bhustruna), sumukha (*Ocimum gratissimum L.*), surasa (*Ocimum sanctum L.*), kutheraka (*Ocimum basilicum L.*), gandeera (*Coleus barbatus (Andr.) Benth.*), kalamalaka (basil *Ocimum tenuiflorum*), parnasa (*Ocimum basilicum L.*), kshavaka (*Brassica nigra (L.) Koch.*) and phanijzaka (*Origanum majorana L.*)
- Consumption of fermented beverages like sura (wine), sauvira (sour gruel), tushodaka (types of vinegar or fermented water of chaff of grain or corn or rice), maireya (a type of intoxicating drink), medaka (spirituous liquor used for distillation), madhulaka (arak distilled from the blossoms of the honey tree or any intoxicating drink [*Madhuca longifolia -Bot.*]), shukta (any sour liquor or gruel), sour preparations of kuvala (*Zizyphus mauritiana Lam.*) and badara (*Zizyphus mauritiana Lam.*) (both are types of jujube)
- Preparations of (rice) flour in excess after meals
- Excessive quantities of pishtanna (cake or pastries or food prepared from fine flour)
- Frequent and/or excess consumption of raw milk, especially after being afflicted by intense heat, or when recovering from a heat-stroke
- Eating Rohini vegetable (*Myrica nagi THUNB.*) with milk
- Meat of Kanakapota (a type of pigeon) cooked with mustard oil and alkali
- Consumption of milk with sour beverages, or food cooked with horse gram (kulattha), oil cake (pinyaka), fruits of jambu (*Syzygium cumini (L.) Skeels*) and lakucha (*Artocarpus lakoocha Roxb.*) after being afflicted with intense heat

With such food articles, a person's pitta dosha is vitiated and the quantity of blood in his body exceeds its normal limits. Along with the increased quantity of vitiated blood in the system, vitiated pitta dosha gets into the circulation. It reaches the channels of transformation of blood (raktavaha srotas) originating from organs like liver and spleen. Due to excess discharge or fluidity (abhishyandi) and heaviness (guru), the congestion in the channels occur. This leads to morbidity in rakta dhatu. [4]

## Lohitapitta

संसर्गाल्लोहितप्रदूषणाल्लोहितगन्धवर्णनुविधानाच्च पित्तं लोहितपित्तमित्याचक्षते॥५॥

sar̄sargāllōhitapradūṣaṇāllōhitagandhavarṇānuvidhānācca [12] pittam  
lōhitapittamityācakṣatē॥५॥

saMsargAllohitapradUShaNAllohitagandhavarNAnuvidhAnAcca [12] pittaM  
lohitapittamityAcakShate||5||

Pitta gets the name lohitapitta because after mixing with blood it acquires the color and smell of blood. [5]

## Prodromal symptoms

तस्येमानि पूर्वरूपाणि भवन्ति; तद्यथा- अनन्नाभिलाषः, भुक्तस्य विदाहः, शुक्ताम्लगन्धरस उट्गारः, छर्देरभीक्षणमागमनं, छर्दितस्य बीभत्सता, स्वरभेदो, गात्राणां सदनं, परिदाहः, मुखादधूमागम इव, लोहलोहितमत्स्यामगन्धित्वमिव चास्यस्य,  
रक्तहरितहारिद्रत्वमङ्गावयवशकून्मूत्रस्वेदलालासिङ्घाणकास्यकर्णमलपिडकोलिकापिडकानाम्, अङ्गवेदना, लोहितनीलपीतश्यावानामर्चिष्मतां च रूपाणां स्वप्ने दर्शनमभीक्षणमिति  
(लोहितपित्तपूर्वरूपाणि भवन्ति)||६||

tasyēmāni pūrvarūpāṇi bhavanti; tadyathā- anannābhilāṣah, bhuktasya vidāhah, śuktāmlagandharasa udgārah, chardērabhīkṣṇamāgamanāṁ, charditasyabībhatsatā, svarabhēdō, gātrānāṁ sadanāṁ, paridāhah, mukhāddhūmāgama iva, lōhalōhitamatsyāmagandhitvamiva  
cāsyasya,raktaharitahāridratvamaṅgāvayavaśakṛnmūtrasvēdalālāsiṅghāṇakāsyakarṇa malapiḍakolikāpiḍakānām [14] , aṅgavēdanā, lōhitānīlapītaśyāvānāmarciṣmatāṁ carūpānāṁ svapnē darśanamabhīkṣṇamiti (lōhitapittapūrvarūpāṇi [15] bhavanti)||6||

tasyemAni pUrvarUpANI bhavanti; tadyathA- anannAbhilAShaH, bhuktasya vidAhaH, shuktAmlagandharasa udgAraH, charderabhIkShNamAgamanAM, charditasyablbhatsatA, svarabhedo, gAtrANAM sadanaM, paridAhaH, mukhAddhUmAgama iva, lohalohitamatsyAmagandhitvamiva  
cAsyasya,raktaharitahAridratvama<sub>ggAvayavashakRunmUtrasvedalAIAsi</sub>gghANakAsyakarNamalapiDa kolikApiDakAnAm [14] , a~ggavedanA,lohitanllaplashyAvAnAmarciShmatAM ca rUpANAM svapne darshanamabhIkShNamiti (lohitapittapUrvarUpANI [15] bhavanti)||6||

The prodromal symptoms of *raktapitta* include aversion to food, hot eructation just after meal, belches with smell and aftertaste of sour gruel, frequent vomiting, ugliness of vomitus, hoarseness of voice, malaise, radiating burning sensation, emittance of smoke from the mouth, smell of metal, blood, or fish , mucus in the mouth, appearance of red, green or yellow spots in body parts, feces, urine, sweat, saliva, nose-secretion, excreta from mouth and ear and boils, bodyache, and frequent vision of red, blue, yellow, blackish and brilliant objects in dreams. [6]

## Complications

उपद्रवास्तु खलु दौर्बल्यारोचकाविपाकश्वासकासज्वरातीसारशोफशोषपाण्डुरोगः स्वरभेदश्च||७||  
upadravāstu khalu daurbalyārōcakāvipākaśvāsakāsajvarātīsāraśōphaśōṣapāṇḍurōgāḥ svarabhēdaśca||7||

upadravAstu khalu  
daurbalyArocakAvipAkashvAsakAsajvarAtlsArashophashoShapANDurogAH  
svarabhedashca||7||

Complications (of *raktapitta*) include debility, anorexia, indigestion, dyspnea, cough, fever, diarrhea, edema, emaciation, anemia and hoarseness of voice. [7]

## Disease pathways

मार्गौ पुनरस्य द्रवौ ऊर्ध्वं, चाधश्च तद्बहश्लेष्मणि शरीरे श्लेष्मसंसर्गादूर्ध्वं प्रतिपद्यमानं कर्णनासिकानेत्रास्येभ्यः प्रच्यवते, बहुवतै तु शरीरे वातसंसर्गादधः प्रतिपद्यमानं मूत्रपरीषमार्गाभ्यां प्रच्यवते, बहश्लेष्मवाते त शरीरे श्लेष्मवातसंसर्गाद्द्रवावपि मार्गौ प्रतिपद्यते, तौ मार्गौ प्रतिपद्यमानं सर्वेभ्य एव यथोक्तेभ्यः खेभ्यः प्रच्यवते शरीरस्य||८||

mārgau punarasya dvau ūrdhvam, cādhaśca| tadbahuślēśmaṇi śarīrē ślēśmasaṁsargādūrdhvam pratipadyamānāṁ karṇanāśikānētrāsyēbhyaḥ pracyavatē, bahuvatē tu śarīrē vātasamaṁsargādadhaḥpratipadyamānāṁ mūtrapurīṣamārgābhyaṁ pracyavatē, bahuślēśmaṇatē tu śarīrē ślēśmaṇatasaṁsargāddvāvapi mārgau pratipadyatē, tau mārgaupratipadyamānāṁ sarvēbhya ēva yathōktēbhyaḥ khēbhyaḥ pracyavatē śarīrasya||८||

mArgau punarasya dvau UrdhvaM, cAdhashca| tadbahushleShmaNi sharIre shleShmasaMsargAdUrdhvaM pratipadyamAnaM karNanAsikAnetrAsyebhyaH pracyavate, bahuvAte tu sharIre vAtasaMsargAdadhaHpratipadyamAnaM mUtrapuriShamArgAbhyAM pracyavate, bahuShleShmaVate tu sharIre shleShmaVAtasaMsargAddvAvapi mArgau pratipadyate, tau mArgaupratipadyamAnaM sarvebhya eva yathoktebhyaH khebhyaH pracyavate sharIrasya||८||

There are two routes of the manifestation of *rakta* - upwards and downwards. In persons having an abundance of *kapha*, vitiated *rakta* goes up and bleeding occurs from ear, nose, eyes and mouth. In those having an excess of *vata*, *rakta* flows downwards along with *vata* and patients bleed through the urinary tract and rectum. Finally, in those having abundance of both *kapha* and *vata*, *rakta* comes out from the body with both the routes and thus bleeds through all the aforesaid orifices. [8]

## Prognosis

तत्र यदूर्ध्वभागं तत् साध्यं, विरेचनोपक्रमणीयत्वाद्बहवौषधत्वाच्च; यदधोभागं तद्याप्यं, वमनोपक्रमणीयत्वादल्पौषधत्वाच्च; यदुभयभागं तदसाध्यं, वमनविरेचनायोगित्वादनौषधत्वाच्चेति॥९॥

tatra yadūrdhvabhāgāṁ tat sādhyāṁ, virēcanōpakramāṇīyatvādbahvauṣadhatvācca; yadadhōbhāgāṁ tadyāpyāṁ,  
vamanōpakramāṇīyatvādalpauṣadhatvācca;yadubhayabhāgāṁ tadasādhyāṁ,  
vamanavirēcanāyōgītvādanauṣadhatvācceti॥९॥

tatra yadUrdhvabhAgaM tat sAdhyaM, virecanopakramaNlyatvAdbahvauShadhatvAcca;  
yadadhobhAgaM tadyApyaM,  
vamanopakramaNlyatvAdalpauShadhatvAcca;yadubhayabhAgaM tadasAdhyaM,  
vamanavirecanAyogitvAdanauShadhatvAcceti॥९॥

Amongst these, that which comes out of the upper orifices is curable and is treatable by purgation due to availability of plenty of drugs for the purpose. That coming out from the lower orifices is palliable because of being amenable to emesis and availability of lesser number of drugs for the purpose. That coming out from both the routes is incurable

because of non-applicability of both emesis and purgation and in want of suitable drugs.  
(9)

### Origin of raktapitta

रक्तपित्तप्रकोपस्तु खलु पुरा दक्षयज्ञोदृध्वंसे रुद्रकोपामर्षाग्निना प्राणिनां  
परिगतशरीरप्राणानामभवज्ज्वरमनु॥१०॥

raktapittaprakopastu khalu purā dakṣayajñoddhvareṇā rudrakōpāmarśāgninā [16]  
prāṇināṁ parigataśarīraprāṇāmabhavajvaramanu||10||

raktapittaprakopastu khalu purA dakShayaj~joddhvaMse rudrakopAmarShAgninA [16]  
prANinAM parigatasharIraprANAnAmabhavajvaramanu||10||

Hystorically, raktapitta occured after jwara because of Rudra's anger pervaded the  
human being at the time of destruction of Daksha's sacrifice. [10]

### General principles of management

तस्याशुकारिणो दावाग्नेरिवापतितस्यात्ययिकस्याश प्रशान्त्यै प्रयतितव्यं मात्रां देशं कालं चाभिसमीक्ष्य  
सन्तप्तेनापतर्पणेन वा मृदुमधुरशिरतिक्तकषायैरभ्यवहार्यः प्रदेहपरिषेकावगाहसंस्पर्शनैर्वमनाद् यैर्वा  
तत्रावहितेनेति॥११॥

tasyāśukāriṇō dāvāgnērīvāpatitasyātyayikasyāśu praśāntyai prayatitavyam mātrāṁ  
dēśāṁ kālāṁ cābhisaṁīkṣya santarpaṇēnāpatarpaṇēna  
vāmṛduṁadhuśāsiśiratiktakaśāyairabhyavahāryaiḥ  
pradēhapariṣēkāvagāhasaṁsparśanairvamanādyairvā tatrāvahitēti||11||

tasyAshukAriNo dAvAgnerivApatitasyAtyayikasyAshu prashAntyai prayatitavyaM  
mAtrAM deshaM kAlaM cAbhisamIkShya santarpaNenApatarpaNena  
vAmRudumadhuShishiratiktakaShAyairabhyavahAryaiH  
pradehapariShekAvagAhasaMsparshanairvamanAdyairvA tatrAvahitenetii||11||

The disease is acute in nature and becomes critical very quickly, by spreading like bush fire. Hence its treatment should be done immediately with saturating or de-saturating soft, sweet, cold, bitter and astringent diet and pastes, baths, emesis etc. after due consideration of dose, place and time. [11]

### Virechana (therapeutic purgation) in raktapitta

भवन्ति चात्र-

साध्यं लोहितपित्तं तद्यदूर्ध्वं प्रतिपद्यते।

विरेचनस्य योगित्वाद्बहुत्वाद्भेषजस्य च॥१२॥

विरेचनं तु पित्तस्य जयार्थं परमौषधम्।

यश्च तत्रान्वयः श्लेष्मा तस्य चानधमं स्मृतम्॥१३॥

भवेद्योगावहं तत्र मधुरं चैव भेषजम्।

तस्मात् साध्यं मतं रक्तं यदूर्ध्वं प्रतिपद्यते॥१४॥  
 bhavanti cātra- sādhyam lōhitapittam tadyadūrdhvam pratipadyatē|  
 virēcanasya yōgitvādbahutvādbhēṣajasya ca||12||  
 virēcanam tu pittasya jayārthē paramauṣadham|  
 yaśca tatrānvayah [17] ślēṣmā tasya cānadhamam smṛtam||13||  
 bhavēdyōgāvaham tatra madhuram [18] caiva bhēṣajam|  
 tasmāt sādhyam matam raktam yadūrdhvam pratipadyatē||14||  
 bhavanti cAtra- sAdhyaM lohitapittaM tadyadUrdhvaM pratipadyate|  
 virecanasya yogitvAdbahutvAdbheShajasya ca||12||  
 virecanam tu pittasya jayArthe paramauShadham|  
 yashca tatrAnvayaH [17] shleShmA tasya cAnadhamam smRutam||13||  
 bhavedyogAvahaM tatra madhuraM [18] caiva bheShajam|  
 tasmAt sAdhyaM mataM raktam yadUrdhvaM pratipadyate||14||

The upward variety of raktapitta is curable because of applicability of purgation and abundance of useful drugs. Purgation is the best remedy for alleviation of pitta and ambivalence to kapha. Sweet drugs are also applicable in this case. Hence, bleeding from the upper part is curable. [12-14]

#### *Vamana (therapeutic emesis) in raktapitta*

रक्तं तु यदधोभागं तद्याप्यमिति निश्चितम्|  
 वमनस्याल्पयोगित्वादल्पत्वादभेषजस्य च॥१५॥  
 वमनं हि न पित्तस्य हरणे श्रेष्ठमुच्यते|  
 यश्च तत्रान्वयो वायुस्तच्छान्तौ चाकरं स्मृतम्॥१६॥  
 तच्चायोगावहं तत्र कषायं तिक्तकानि च|  
 तस्माद्याप्यं समाख्यातं यदुक्तमनुलोमगम्॥१७॥  
 raktam tu yadadhōbhāgam tadyāpyamiti niścitam|  
 vamanasyālpayōgitvādalpatvādbhēṣajasya ca||15||  
 vamanam hi na pittasya haraṇē [20] śrēṣṭhamucyatē|  
 yaśca tatrānvayō [21] vāyustacchāntau cāvaraṁ smṛtam||16||  
 taccāyōgāvaham [22] tatra kaṣāyam tiktakāni ca|

tasmādyāpyaṁ samākhyātāṁ yaduktamanulōmagam [23] ||17||  
 raktaM tu yadadhobhAgaM tadyApyamiti nishcitam|  
 vamanasyAlpayogitvAdalpatvAdbheShajasya ca||15||  
 vamanaM hi na pittasya haraNe [20] shreShThamucyate|  
 yashca tatrAnvayo [21] vAyustacchAntau cAvaraM smRutam||16||  
 taccAyogAvahaM [22] tatra kaShAyaM tiktakAni ca|  
 tasmAdyApyaM samAkhyAtaM yaduktamanulomagam [23] ||17||

Hemorrhage from the lower parts is decidedly palliable because emesis has limited efficacy here and effective drugs are also a few. Emesis is not so efficacious for elimination of pitta and it is also ineffective in alleviation of vata responsible for the downward flow. Moreover, astringents and bitter drugs are not applicable there. Hence hemorrhage from the lower parts is considered palliable. [15-17]

*Poor prognosis in severe bleeding*

रक्तपितं तु यन्मार्गो द्वावपि प्रतिपद्यते।  
 असाध्यमिति तज्जेयं पूर्वक्तादेव कारणात्॥१८॥  
 नहि संशोधनं किञ्चिदस्त्यस्य प्रतिमार्गगम्।  
 प्रतिमार्गं च हरणं रक्तपिते विधीयते॥१९॥  
 एवमेवोपशमनं सर्वशो नास्य विद्यते।  
 संसृष्टेषु च दोषेषु सर्वजिच्छमनं मतम्॥२०॥  
 इत्युक्तं त्रिविधोदर्कं रक्तं मार्गविशेषतः॥२१॥  
 raktapittāṁ tu yanmārgau dvāvapi pratipadyatē|  
 asādhyamiti tajjñēyāṁ pūrvōktādēva kāraṇāt||18||  
 nahi saṁśōdhanāṁ kiñcidastyasya pratimārgagam|  
 pratimārgāṁ ca haraṇāṁ raktapittē vidhīyatē||19||  
 ēvamēvōpaśamanāṁ sarvaśō nāsyā vidyatē|  
 sar̄nsr̄stēṣu ca dōṣēṣu sarvajicchamanāṁ matam [25] ||20||  
 ityuktāṁ trividhōdarkāṁ raktāṁ mārgaviśēṣataḥ||21|  
 raktapittaM tu yanmArgau dvAvapi pratipadyate|  
 asAdhyamiti tajj~jeyaM pUrvoktAdeva kAraNAt||18||

nahi saMshodhanaM ki~jcidastyasya pratimArgagam|  
 pratimArgaM ca haraNaM raktapitte vidhlyate||19||  
 evamevopashamanaM sarvasho nAsya vidyate|  
 saMsRuShTeShu ca doSheShu sarvajicchamanaM matam [25] ||20||  
 ityuktaM trividhodarkaM raktaM mArgavisheShataH|21|

In cases where blood comes out from both the routes, raktapitta is incurable because no effective evacuative measure is applicable. In raktapitta, elimination of dosha from the opposite route is recommended. Thus, the three types (on the basis of the routes of bleeding) of raktapitta progression (udarka) have been described. [18-20]

#### *Factors affecting prognosis*

एभ्यस्तु खलु हेतुभ्यः किञ्चित्साध्यं न सिध्यति||२१||  
 प्रेष्योपकरणाभावाददौरात्म्यादवैद्यदोषतः।  
 अकर्मतश्च साध्यत्वं कश्चिद्गोत्तिवर्तते॥२२॥  
 तत्रासाध्यत्वमेकं स्यात् साध्ययाप्यपरिक्रमात्॥२३॥  
 ēbhyastu khalu hētubhyah kiñcitsādhyam na sidhyati||21||  
 prēṣyōpakaraṇābhāvāddaurātmyādvaidyadōṣataḥ।  
 akarmataśca sādhyatvarṁ kaścidrōgō'tivartatē||22||  
 tatrāsādhyatvamēkam syāt sādhyayāpyaparikramāt||23||  
 ebhyastu khalu hetubhyaH ki~jcitsAdhyaM na sidhyati||21||  
 preShyopakaraNAbhAvAddaurAtmyAdvaidyadoShataH|  
 akarmatashtca sAdhyatvaM kashcidrogo~ativartate||22||  
 tatrAsAdhyatvamekaM syAt sAdhyayApyaparikramAt||23|

Some curable diseases do not get treated successfully (and lead to incurability) because of following factors:

- Not following proper treatment protocol
- lack of attendants and equipment
- Mischievousness and fault of the physician.

If the disease is not treated, then it proceeds to incurability. If treated well, sometimes the incurable disease may become curable or palliable. [21-23]

## Signs of incurable raktapitta

रक्तपित्तस्य विज्ञानमिदं तस्योपदिश्यते॥२३॥

यत् कृष्णमथवा नीलं यद्वा शक्रधनुष्प्रभम्।

रक्तपित्तमसाध्यं तद्वाससो रञ्जनं च यत्॥२४॥

भृं पूत्यतिमात्रं च सर्वोपद्रववच्च यत्।

बलमांसक्षये यच्च तच्च रक्तमसिद्धिमत्॥२५॥

येन चोपहतो रक्तं रक्तपित्तेन मानवः।

पश्येद्दृश्यं वियच्चापि तच्चासाध्यं न संशयः॥२६॥

raktapittasya vijñānamidam tasyopadiśyatē||23||

yat krṣṇamathavā nīlam yadvā śakradhanuṣprabham|

raktapittamasādhyam tadvāsasō rañjanam ca yat||24||

bhr̄śam pūtyatimātram ca sarvōpadravavacca yat|

balamāṁsakṣayē yacca tacca raktamasiddhimat||25||

yēna cōpahatō raktaṁ raktapittēna mānavah|

paśyēddṛśyam viyaccāpi taccāsādhyam na saṁśayah||26||

raktapittasya vij~jAnamidaM tasyopadishyate||23||

yat kRuShNamathavA nllaM yadvA shakradhanuShprabham|

raktapittamasAdhyaM tadvAsaso ra~jjanaM ca yat||24||

bhRushaM pUtyatimAtraM ca sarvopadravavacca yat|

balamAMsakShaye yacca tacca raktamasiddhimat||25||

yena copahato raktaM raktapittena mAvaH|

pashyeddRushyaM viyaccApi taccAsAdhyaM na saMshayaH||26||

Now described are types of raktapitta, identified (by their physical appearance). Raktapitta is incurable if the blood is black, blue or of rainbow color and stains clothes. Bleeding with excessively fetid smell, in large quantities, and associated with all the complications, particularly in weak and emaciated patients is incurable. A patient, if sees things around him and the sky red, is certainly suffering from an incurable variant of the disease. [23-26]

तत्रासाध्यं परित्याज्यं, याप्य यत्नेन यापयेत्।

साध्यं चावहितः सिद्धैर्भेषजैः साध्येदभिषक्॥२७॥

tatrāśādhyam parityājyam, yāpyam yatnēna yāpayēt|

sādhyam cāvahitah siddhairbhēṣajaiḥ sādhayēdbhiṣak||27||

tatrAsAdhyaM parityAjaM, yApyaM yatnena yApayet|

sAdhyaM cAvahitaH siddhairbheShajaiH sAdhayedbhiShak||27||

A patient suffering from the incurable variant should be avoided, while the one with the palliable variant should be managed with efforts and the curable one should be treated successfully with tried remedies. [27]

## Summary

तत्र श्लोकौ-

कारणं नामनिर्वृतिं पूर्वरूपाण्युपद्रवान्।

मार्गो दोषानुबन्धं च साध्यत्वं न च हेतुमत्॥२८॥

निदाने रक्तपित्तस्य व्याजहार पुनर्वसुः।

वीतमोहरजोदोषलोभमानमदस्पृहः॥२९॥

tatra ślōkau- kāraṇam nāmanirvṛttim pūrvarūpānyupadrvān|

mārgau dōṣānubandham ca sādhyatvam na ca hētumat||28||

nidānē rakta-pittasya vyājahāra punarvasuh|

vītamōharajōdōṣalōbhāmānamadaspr̄hah||29||

tatra shlokau- kAraNaM nAmanirvRuttiM pUrvarUpANyupadrvAn|

mArgau doShAnubandhaM ca sAdhyatvaM na ca hetumat||28||

nidAne rakta-pittasya vyAjahAra punarvasuH|

vItamoharajodoShalobhamAnamadaspRuhaH||29||

Now summarizing the chapter–

Etiology, etymology of the disease, prodromal symptoms, complications, routes, association of dosha, curability (or otherwise), with reasoning – all this has been addressed in the chapter on diagnosis of rakta-pitta by Punarvasu who has shed off tamas and rajas, dosha, greed, conceit and pride. [28-29]

इत्यग्निवेशकृते तन्त्रे चरकप्रतिसंस्कृते।

निदानस्थाने रक्तपित्तनिदानं नाम द्वितीयोऽध्यायः॥२॥

ityagnivēśakṛtē tantrē carakapratisaṁskṛtē  
 nidānasthānē raktapittanidānam nāma dvitīyō'dhyāyah||2||  
 ityagniveshakRute tanre carakapratisaMskRute  
 nidAnasthAne raktapittanidAnaM nAma dvitlyo~adhyAyaH||2||

Thus ends the second chapter on diagnosis of raktapitta in Nidana Sthana in the treatise composed by Agnivesha and redacted by Charak. [2]

## Tattva Vimarsha (Fundamental principles)

- *Rakta* and *pitta* have a cause-and-effect relationship because of their common origin, and this fact is important in the pathogenesis and manifestation of *raktapitta*.
- The *amla* (sour), *lavana* (salty), *katu* (pungent) food articles with *ushna* (hot potency), *tikshna* (sharply acting) lead to vitiation of *pitta dosha* and blood. This causes *abhisyanda* (excess discharge leading to increase in volume of fluid) and *guru* (heaviness) in blood. This results in obstruction of *raktavaha srotasa* rooted in *yakrita*(liver)-*pleeha* (spleen) and *raktapitta* (hemorrhage).
- *Raktapitta* disorders can be classified by the route of bleeding. The vitiated *pitta* and *rakta* if gets associated with vitiated *kapha* causes bleeding from the upper orifices in the body. While if associated with vitiated *vata*, it leads to bleeding from the lower orifices. Vitiation of all the three *doshas*, from the standpoint of *raktapitta*, is considered incurable.
- Purification therapy from the opposite route is unique for the treatment of *raktapitta*. If the bleeding is from upper orifices then purgation is done and if it is from the lower route then *vamana* is indicated.
- Prognosis is based on *dosha*, route, purification treatment, and availability of effective medicines.

## Vidhi Vimarsha (Applied Inferences)

What is *rakta*'s relationship with blood? *Rakta* is a *dhatu*, or a flowing tissue that is responsible for the sustenance of life. Unlike what has been written in various commentaries or texts on *rakta*, blood is not the same as *rakta dhatu*. Blood contains formed elements (RBC, WBC, platelets) which are products of *sarakta meda*, the integral component of *majja dhatu*. It has *plasma* containing minerals, vitamins, procoagulant and anticoagulant factors, enzymes, hormones, neurotransmitters, nutrients, etc., which are mostly assigned to *rasa dhatu*. Blood also contains fats, cholesterol, free fatty acids etc., which are products of *meda dhatu*. It contains blood proteins such as actin, myosin, myoglobin, etc. which are integral components of *mamsa dhatu*. It also contains metabolic wastes such as urea and lactic acid etc., which are *mala*. Therefore, *rakta dhatu* is a component of blood, using it as part of its material structure for its functions.

Blood is a balanced fluid that will not cause disease on its own, since its job is to give life. *Rakta* is a *dhatu* with the functions of *jeevana*, carriage, transformation, and the role of traveling through the arterial system, providing building blocks for creation and sustenance of the organs in the *koshtha*. Indeed, it was *rakta* that helped create them in the embryonic state. Prolonged consumption of *pitta* provoking diet and lifestyle vitiate *rakta/blood*. When the *rakta/blood* is vitiated, then it becomes an incompatible substance to the body. The body tries to clear it by expelling it in the form of bleeding.

The *rakta*, containing this contaminated *pitta dosha* provoking it, becomes increased in volume, and continues to circulate through the body, disturbing and dominating over all the functions of the *rakta* tissue. This *rakta-pitta* then blocks, coats, and vitiates the blood and the organs that *rakta* produces and nourishes. In *raktapitta*, the disease requires recognition early in its course to provide a person a cure, as manifestation of actual symptoms indicates end-stage.

Nutritional research claims on substances linked to hypo-coagulation and/or bleeding disorders

## Vitamin K

Much of the research on dietary interactions with bleeding disorders comes from the interaction of foods with warfarin. Since 1951, warfarin has been used as an anticoagulant, effectively preventing the formation of blood clots in the blood vessels and their migration elsewhere in the body respectively. Warfarin reduces the availability of the reduced form of Vitamin K1, a critical molecule in the coagulation cascade, affecting blood coagulation proteins prothrombin and factor VII. Warfarin inhibits the enzyme vitamin K epoxide reductase, which recycles Vitamin K1 from its oxidized form to a ready reduced form. The net effect is that coagulation is lessened. Foods with high vitamin K1 directly supply the vitamin to the body, bypassing the inhibition of warfarin; thus they reinitiate the coagulation pathway.

These foods include leafy vegetables such as spinach, cabbage and broccoli, darker varieties of lettuces, some radishes, and the herbs parsley, cilantro and dill.

Spices and herbs with high salicylate content block vitamin K and act as natural blood thinners. The food substances mentioned in the etiology are rich in salicylates.

Garlic (*Rasona*) is clearly-mentioned among the etiological factors of *raktapitta*. [Cha.Sa.Nidana Sthana 2/4] Garlic contains nine different naturally-occurring anti-platelet compounds. It also acts as natural antibiotic that can kill intestinal bacteria, which manufacture vitamin K.

## Omega-3 Fatty Acids

Fish oil is a rich source of omega-3 fatty acids. Omega-3-fatty acids help to thin the blood. Fish may therefore be a great food for people who are at risk of blood clots but too much consumption of omega-3 can be at risk of bleeding disorders. This fact was long back observed and reported in Ayurveda in [Cha.Sa.Nidana Sthana 2/4]

## Alcohol

Charak describes a group of preparations containing alcohol under nidana (etiological factors) [Cha.Sa.Nidana Sthana 2/4] like sura, sauvira, shukta, badaramala. Ayurvedic classics warn against excessive use of alcohols in pitta-vitiated patients, due to their heating and drying effects. In addition, biomedical research in 1986, suggests that subclinical vitamin K deficiency occurs in alcoholics, contributing to hypo-coagulability.

In summary, it appears that all the foods listed, either due to inherent potency (veerya) or combinations that create difficulty to digest using the body's own heat, will raise a level of heat in the body that aggravates pitta dosha and initiates the cascade of pitta kopa that leads eventually, if un-intervened, to rakta pitta.

## Excess heat

Among the lifestyle factors that lead down to aggravated *pitta* (*viharaja nidanas*) and *rakta pitta* are excessive exercise (*vyayama*), and exposure to sunlight. Scientific evidence has now established that vigorous exercise appears to lower vitamin K levels and thus thin the blood. Sunlight increases the conversion of Vitamin D to Vitamin D3 in the skin; a recent clinical trial of a biologically active metabolite of Vitamin D3 demonstrated an unanticipated reduction of thrombosis in cancer patients. Therefore, it appears that Vitamin D3 reduces blood clotting.

## Hereditary issues

Some bleeding disorders are known as hereditary or acquired through genetic transmission. Ayurveda seems to point to specific foods and habits that promote the manifestation of acquired bleeding disorders; one could propose an epigenetic mechanism to explain these disorders that have eventual onset. Bleeding disorders such as hemophilia that occur from birth, indeed all hereditary imperfections, are explained in Ayurveda with the concept of *beeja dosha*, or inheritance of *paapam* through cycles of *karma*.

Some pharmaceutical medications promote bleeding disorders. These situations can be treated by avoiding the etiological factors listed in this chapter. Once bleeding begins, the disease can be treated by removing the medicine, giving the patient sources of strong healthy *pitta dosha*, and fortifying the *rakta* so that organs fed by *rakta* can remain as healthy as possible.

## Pathophysiology of Bleeding/Hemorrhagic Disorders in modern medicine

Per biomedicine, bleeding disorders are a group of heterogenous conditions that occur when the blood cannot clot properly. In normal clotting, platelets stick together when prompted by a stimulus that invokes the clotting pathway to ultimately form a plug at the site of an injured blood vessel. Proteins in the blood (clotting factors) are activated when either a pathogen or an exposed cell wall signal rupture of the blood vessel. An interactive cascade then leads to the formation of a fibrin clot, which holds the platelets

in place and allows repair to occur at the site of the injury while preventing blood from escaping the blood vessel. While too much clotting can create either a thrombus or embolus that may lead to a heart attack and stroke, the inability to form clots can be very dangerous as well, as excess bleeding will also interrupt the integrity of the vascular system.

Many bleeding disorders are considered to be hereditary. Hemophilia, affecting mostly males, is perhaps the most well-known bleeding disorder, although it is relatively rare (affecting about 1 in 5,000 people worldwide). Many more people are affected by von Willebrand disease (VWD), the most common bleeding disorder in the USA. von Willebrand disease can affect both males and females.

Normal coagulation pathophysiology is described according to its major components:

1. Vessel wall
2. Platelet function
3. Coagulation pathway
4. Clot inhibition/lysis

#### *I. Hemorrhagic Disorder Classifications*

Hemorrhagic disorders can also occur from functional abnormalities of the vascular wall and are classified as:

1. **Hereditary:** hereditary hemorrhagic telangiectasia, hereditary disorders of connective tissue such as Ehlers-Danlos syndrome
2. **Secondary:** infections, chemical factors or drugs, disorders of metabolism (Vitamin C or K deficiency), pathological changes of vascular wall (atherosclerosis), connective tissue diseases
3. **Allergy:** allergic purpura
4. **Other purpuras:** purpura simplex, senile purpura, mechanic purpura, paraproteinemia

#### *II. Platelet abnormalities*

1. Thrombocytopenia:
  1. Diminished or defective platelet production: aplastic anemia, marrow infiltration (carcinoma, leukemia, myelofibrosis, tuberculosis, etc), infections, drugs that act on platelet production (alcohol, thiazide diuretics).
  2. Enhanced platelet destruction: idiopathic thrombocytopenic purpura, drug-induced, thrombotic thrombocytopenic purpura.
  3. Sequestration of platelets: hypersplenism
2. Thrombocytosis:
  1. Primary: essential thrombocythemia.
  2. Secondary: infections, injury, post-splenectomy chronic myelocytic leukemia, other myeloproliferative disorders (such as polycythemia vera)

3. Functional abnormalities of platelets:
  1. Congenital: thrombasthenia, giant platelet syndrome (Bernard-Soulier syndrome).
  2. Acquired: due to drugs, uremia, liver diseases, dysproteinemias

### *III. Coagulation disorders due to coagulation factor deficiencies*

1. Congenital: hemophilia A (F VIII deficiency), hemophilia B (F IX deficiency), factor XI deficiency (formerly hemophilia C), hypothrombinogenemia, hypofibrinogenemia, von Willebrand's disease, other coagulation factors deficiency, including deficiency of activated protein C inhibitor structural abnormalities
2. Acquired: Vitamin K deficiency, severe liver diseases, drugs (dicumarol), disseminated intravascular coagulation (DIC) etc

### *IV. Hyperfibrinolysis*

1. Primary: Congenital deficiency of α2 antiplasmin, clinical use of urokinase, liver diseases, liberation of tissue plasminogen activator into the circulation
2. Secondary: DIC

## **Causes of Bleeding**

When normal hemostatic mechanisms fail, major hemorrhage may follow minor trauma or may appear to arise spontaneously. Biomedicine observes spontaneous bleeding primarily from either the rectum or from the naso-pharyngeal cavity.

### *A. Causes of bleeding from the mouth*

1. Common causes of bleeding from the mouth include:
  1. Dental caries, due to decay from chronic bacteria
  2. Trauma, due to mechanical injury
  3. Periodontal diseases, due to tissue decay from infectious origin, metabolic diseases or nutritional deficiencies
2. Rare causes of bleeding from the mouth include:
  1. Hemophilia
  2. Leukemia
  3. Viral hemorrhagic fevers
3. Iatrogenic procedures such as crown placement, dental cleaning, placement and use of dentures, plaque removal, root canal, post tonsillectomy bleeding, and tooth extraction
4. Other causes of bleeding from the mouth include:
  1. Bleeding diathesis
  2. Carcinoma, squamous cell of head and neck
  3. Hantavirosis
  4. Idiopathic thrombocytopenic purpura
  5. Pancytopenia

6. Stomatitis
7. Thrombocytopenia
8. Tonsillar abscess

#### *B. Causes of Rectal Bleeding*

Rectal bleeding, known medically as hematochezia, refers to the passage of red blood through the anus, often mixed with stool and/or blood clots. Rectal bleeding occurs from the tissues adjoining the anus. Blood in the stool does not always originate from the rectum but can come from any part of the gastro-intestinal tract. In fact, the color of the blood in the stool signifies its origin and could be red, maroon, brown, or black. The blood may also be invisible to the naked eye and only appear in the stool under microscopic investigation (thus it is called occult blood). When the blood passes through the zone of digestion in the duodenum, enzymes denature the hemoglobin changing its color from red to brown. When the blood passes through both the stomach's intense acidic environment into the duodenum's alkaline enzymes, the denaturing process renders it black by the time it exits from the rectum. Some of the common causes of rectal bleeding include anal fissure, hemorrhoids, diverticulosis, colon cancer and polyps, post-polypectomy, angiodysplasias, colitis, proctitis, and Meckel's diverticula. Rectal bleeding originating in the colon generally appears red in color. The origin of rectal bleeding is determined by history and physical examination, including tests such as anoscopy, flexible sigmoidoscopy, colonoscopy, radionuclide scans, visceral angiograms, and blood tests. The severity of rectal bleeding, determined by the quantity of blood passed, varies widely. Most blood in the stool or rectal bleeding is mild and self-limited. Many patients report only passing a few drops of fresh blood that turns the toilet water pink or observing spots of blood on toilet paper. Others may report brief passage of a spoonful or two of blood.

Bleeding may be moderate or severe. Patients with moderate bleeding will repeatedly pass larger quantities of bright or dark red (maroon-colored) blood often mixed with stools and/or blood clots. Patients with severe bleeding may either suffer from multiple bowel movements in a day or a single bowel movement containing a large amount of blood. Moderate or severe rectal bleeding can exhibit typical symptoms of anemia - weakness, dizziness, near-fainting or fainting, signs of low blood pressure or orthostatic hypotension, or a significant drop in blood pressure when going from a sitting or lying position to a standing position. In rare cases, the bleeding may be so severe that the body exhibits symptoms of shock due to excessive loss of blood. Moderate or severe rectal bleeding must be evaluated and treated in the hospital and may require the patient to undergo emergency hospitalization and transfusion of blood. Rectal bleeding is treated by correcting the resulting low blood volume and anemia, by determining the site and cause of blood loss, by stopping the bleeding, and by preventing relapse in bleeding.

## Correlation between Ayurvedic knowledge and Western medicine

Biomedical textbooks rarely discuss the pathophysiology of bleeding disorders in terms of diet or nutrition, unlike Ayurveda. There is, therefore, a need to research the correlation between food articles and bleeding disorders. The following food substances are etiological factors of *raktapitta*, since these seem to act as blood thinners and can cause bleeding disorders in predisposed patients: [Cha.Sa.Nidana Sthana 2/4]

1. *Mulaka* (*Raphanus sativus* Linn.), radish, Brassicaceae family
2. *Sarshapa* (*Brassica campestris* Var.), *Brassica rapa* - turnip, napa cabbage, canola,
3. *Lashuna* (*Allium sativum* Linn.), garlic
4. *Sumukha* (*Ocimum* sp.),
5. *Kutheraka* (*Ocimum* sp.)

Also, the pathogenesis of blood disorders do not mention why a body would be predisposed to vessel wall problems, platelet dysfunctions, or clot inhibitions. Bleeding from different orifices of the body is not correlated with pathophysiology in biomedicine. Ayurveda however discusses *raktapitta* as an endpoint to a series of imbalancing events, and separates the discussion of diagnosis in Nidana Sthana from the discussion of treatment in Chikitsa Sthana.

## Summary

Internal hemorrhage/hemorrhagic disorders of conventional medicine are well described in Ayurvedic texts in the form of *raktapitta* disorders, and the pathogenesis of *raktapitta* diseases forms the basis of this chapter. *Raktapitta* bleeding occurs through bodily orifices (mouth, rectum, urethra, nose, eye, ear, vagina, as well as hair-roots), per Ayurveda. The parallels between the description of bleeding disorders in conventional medicine and Ayurveda are quite apparent in this regard. An important aspect of the discussion on *raktapitta* disorders is the fact that some disorders are curable, some palliable and some are incurable – and that all these variants are dependent on *doshic* imbalances beyond just the *pitta* vitiation. It is important to note here that if proper attention is not paid, even curable disorders can soon aggravate to incurable variants. Avoidance of known causative factors is certainly one of the best measures to overcome this disease. Attempts need to be made to collect data on the effect of these factors (known to Ayurveda) and establish an empirical, evidence-based relationship between food articles (some of the primary etiological factors) and bleeding disorders.

## Related Chapters

- Vidhishonitiya Adhyaya
- Raktapitta Chikitsa

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## Gulma Nidana

### Nidana Sthana Chapter 3. Diagnosis and etio-pathogenesis of Abdominal lumps

#### Abstract

The third chapter describes the etiology, pathogenesis, clinical features and therapeutics of lumps in abdomen. Gulma, a (stable or transitory) growth that could occur anywhere in the body is primarily caused by a vitiated vata. The description given in the text cannot be correlated with any single entity of conventional medicine, but denotes localized intra-abdominal swellings of multiple origin in terms of their cause, site, features etc. In patients weakened by or recuperating from diseases or cleansing therapies (vamana, etc.), or suffering from very stressful conditions, vata gets vitiated and enters the mahasrotas (gastrointestinal tract) causing the formation of gulma. Amongst the five types of gulma, sannipatika gulma is incurable whereas remaining can be managed according to dosha involvement.

**Keywords:** *Gulma, mahasrotas, koshtha, dhatukshaya, avarana, abdominal lumps, intra-abdominal swellings, tumors.*

#### Introduction

The word *gulma* is derived from the Sanskrit root *gud*, literal meaning encircling or surrounding. Therefore the word *gulma* stands for an entity that encircles, envelops or covers something. According to mythological concepts described in this text, people fleeing from the wrath of Lord Shiva, when he was dismantling Daksha's holy sacrifice, were afflicted with this disease. This legend is symbolic, since situations such as panic, stress, or grief, usually accompanying such a chaotic, cataclysmic event would lead to vitiation of *vata* causing the appearance of *vata*-dominant diseases like *gulma*, etc. In Ayurveda, *gulma* has been defined as large palpable, rounded, intra- abdominal swellings between *hridaya* (upper abdomen) and the *basti* (bladder) regions, which develop due to accumulation of *doshas* with predominance of *vata*. Such swellings are either transitory or static, and display the properties of spontaneous regression and reappearance. *Gulmas* are usually non-suppurative and are separate entities from other intra-abdominal swellings such as *antar vidradhi* (internal abscesses) where suppuration is often found.

The vitiated *vata*, in conjunction with other *doshas*, gets into the *mahasrotas* and get lodged either in the *amashaya* (stomach), *pittashaya* (gallbladder), *pakwashaya* (cecum) or in other regions like *hridaya* (epigastric), *basti* (bladder) and *nabhi* (umbilicus) leading to formation of deep-rooted shrub-like mass. Here a new term has been introduced i.e., *mahasrotas*, that could be explained as viscera including organs of the gastrointestinal tract. However, commentators have suggested that it stands for all of abdominal viscera, including the kidneys. Thus it is evident that under the definition of *mahasrotas* all the organs in abdomen are included. As mentioned earlier, *gulma* afflicts

the gastrointestinal region between the heart and the bladder. Depending upon the region it afflicts, it can be classified into four general types common to males and females:

- *Hridaya* (epigastric region),
- *Basti* (pelvic region),
- *Nabhi* (perumbilical region) and
- Both the *parshva* (both the flanks)

Besides these, there is a fifth type afflicting only women - *shonitaja gulma* of the *yoni* region i.e. in the *garbhashaya* or uterus region. Such *gulma* shows a progressive increase in size and thus requires a special attention to differentiate it from pregnancy. While there are *gulma* variants like *paittika* and *kaphaja gulma* caused by an excess of *pitta* and *kapha* respectively, it is essentially a *vata* disorder. *Sannipatika gulma* is caused due to the vitiation of all the three *doshas*. Since abdominal organs have *mamsa dhatus* as the main component, all the *siragranthi* (glandular/tumorous) types of *srotodushti* (vitiation of channels carrying body components) of abdominal viscera have also been covered under *gulma*. This chapter also covers obstruction and inflammation of viscera having no swelling.

## Sanskrit Text, Transliteration and English Translation

अथातो गुल्मनिदानं व्याख्यास्यामः||१||

इति ह स्माह भगवानात्रेयः||२||

athātō gulmanidānām vyākhyāsyāmāḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAto gulmanidAnaM vyAkhyAsyAmaH||1||

Iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Gulma Nidana”(Diagnosis and etio-pathogenesis of Abdominal lumps). Thus said Lord Atreya.[1-2]

### Classification of *gulma*

इह खलु पञ्च गुल्मा भवन्ति; तद्यथा- वातगुल्मः, पित्तगुल्मः, श्लेष्मगुल्मो, निचयगुल्मः, शोणितगुल्म  
इति||३||

iha khalu pañca gulmā bhavanti; tadyathā- vātagulmaḥ, pittagulmaḥ, ślēṣmagulmō,  
nicayagulmaḥ, śōṇitagulma iti||3||

Iha khalu pa~jca gulma bhavanti; tadyathA- VatagulmaH, pittagulmaH, shleShmagulmo,  
nicaya gulmaH, shoNitagulma iti||3||

There are five types of *gulma*- *vata* dominant *gulma*, *pitta* dominant *gulma*, *shleshma/kapha* dominant *gulma*, *nichaya* (*tridosha* dominant) *gulma*, and *shonita gulma*.[3]

### Agnivesha's question

एवंवादिनं भगवन्तमात्रेयमग्निवेश उवाच- कथमिह भगवन् पञ्चानां गुल्मानां विशेषमभिजानीमहे; नह्यविशेषविद्रोगाणामौषधविदपि भिषक् प्रशमनसमर्थो भवतीति॥४॥

ēvarṁvādinam bhagavantamātrēyamagnivēśa uvāca- kathamiha bhagavan pañcānāṁ gulmānāṁ viśēsamabhijānīmahē; nahyavisēśavidrōgāṇāmauṣadhadhavidapibhiṣak praśamanasamarthō bhavatīti॥४॥

evaMvAdinaM bhagavantamAtreyamagnivesha uvAca- kathamiha bhagavan  
pa~jcAnAM gulmanAM visheShamabhijAnlmahe;  
nahyavisheShavidrogANAmuShadhavidapi bhiShak prashamanasamartho  
bhavatIti॥४॥

After Lord Atreya said this, Agnivesha asked, "Sir, How can we know the specific characteristics of these five *gulmas*? Because without this knowledge, such patients cannot be successfully treated by a physician even though he is well versed in the selection and usage of drugs." [4]

तमवाच भगवानात्रेयः- समत्थानपर्वरूपतिङ्गवेदनोपशयविशेषेभ्यो विशेषविज्ञानं गुल्मानां भवत्यन्येषां च रौगाणामग्निवेश! ततु खेलु गुल्मेषूच्यमानं निबोध्य॥५॥

tamuvāca bhagavānātrēyah- samutthānapūrvarūpaliṅgavēdanōpaśayaviśēbhyō viśēśavijñānaṁ gulmānāṁ bhavatyanyēśāṁ ca rōgāṇāmagnivēśa! tattu khalu [1]gulmēṣūcyamānaṁ nibōdha॥५॥

TamuvAca bhagavAn AtreyaH-  
samutthAnapUrvarUpali~ggavedanopashayavisheShebhyo visheShavij~jAnaM  
gulmanAM bhavatyanyeShAM ca rogANAgnivesha! Tattu khalu  
gulmeShUcyamAnaM nibodha॥५॥

Lord Atreya replied, "Agnivesha! Specific characteristics of the five *gulma* as well as other diseases are defined on the basis of their etiology, prodromal symptoms, clinical features with various types of pains, and therapeutic applicability." [5]

### Etiopathogenesis of *vata*-dominant *gulma*

यदा पुरुषो वातलो विशेषेण ज्वरवमनविरेचनातीसाराणामन्यतमेन कर्शनेन कर्शितो वातलमाहारमाहरति, शीतं वा विशेषेणातिमात्रम् अस्नेहपर्वं वा वमनविरेचने पिबति, अनुदीर्णा वा छर्दिमदीरयति, उदीर्णान् वातमत्रपरीषवेगान्निरुणदधि, अत्येशितो वा पिबति नवोदकमतिमात्रम्, अतिसङ्क्षेपभिणा वा यानेन याति, औतिव्यवायव्यायाममदयशोकरुचिर्वा, अभिघातमृच्छति वा, विषमासनशयनस्थानचङ्कमणसेवी वा भवति, अन्यद् वा किञ्चिद्वेविधिं विषममतिमात्रं व्यायामजातमारभते, तस्यापचाराद् वातः प्रकोपमापद्यते॥६॥

yadā puruṣo vātalō viśeṣēṇa jvaravamanavirēcanātīsārāṇāmanyatamēna karśanēna  
karśitō vātalāmāhāramāharati, śītar̄m vā viśeṣēṇātimātram [3] , asnēhapūrvē  
vāvamanavirēcanē pibati, anudīrṇāṁ vā chardimudīrayati, udīrṇān  
vātamūtrapurīṣavēgānniruṇaddhi, atyaśitō vā pibati navōdakamatimātram,  
atisaṅkṣōbhīṇā vā yānēnayāti, ativyavāyavyāyāmamadyaśōkarucircvā,  
abhighātamṛcchati vā, viṣamāsanaśayanasthānacaṅkramaṇasēvī [4] vā bhavati,  
anyadvā kiñcidēvamvidharmviṣamamatimātrāṁ vyāyāmajātamārabhatē,  
tasyāpacārādvātah [5] prakōpamāpadyatē||6||

yadA puruSho Vatalo visheSheNa jvaravamanavirecanAtIsArANAmnyatamena  
karshanena karshito VatalamAhAramAharati, shItaM vA visheSheNAtimAtram  
asnehapUrve vA vamanavirecane pibati, anudIrnAM vA chardimudIrayati, udIrnAn  
VatamUtrapurlShavegAnniruNaddhi, atyashito vA pibati navodakamatimAtram,  
atisa~gkShobhiNA vA yAnena yAti, ativyavAyavyAyAmamadyashokarucircvA,  
abhighAtamRucchati vA, viShamAsanashayanasthAnaca~gkramaNasevI vA bhavati,  
anyadvA ki~jcidevaMvidhaM viShamamatimAtraM vyAyAmajAtamArabhate,  
tasyApacArAdVataH prakopamApadyate||6||

When a person of *vatika* constitution, particularly emaciated due to one of the debilitating factors like fever, emesis, purgation and diarrhoea, consumes *vata*-aggravating food or excessively cold food, in excessive quantities, or is administered emesis or purgation without prior unction, he vomits profusely and holds up impelling urges of flatus, urine, bowel movement. Or if such a person, after consuming a heavy meal, drinks a lot of fresh water or travels by an excessively jerking vehicle, indulges in excessive sexual intercourse, intensive physical exercise, or drinks alcoholic drinks, or suffers from excessive anxiety, or is subjected to injury or uses uneven postures in sitting, sleeping, standing and walking, or starts some other similar sort of irregular and excessive physical exercises -*vata* gets vitiated or aggravated. [6]

स प्रकपितो वायुर्महासोतोऽनुप्रविश्य रौक्ष्यात् कठिनीभूतमाप्लत्य षिण्डितोऽवस्थानं करोति हृदि बस्तौ पाश्वर्योर्नाभ्यां वा; स शूलमुपजनयति ग्रन्थीश्चानेकविधान्, षिण्डितश्चावतिष्ठते, स षिण्डितत्वाद् 'गुल्म' इत्यभिधीयते; स महराधमति मुहुरल्पत्वमापद्यते; अनियतविपुलाणुवेदनश्च भवति चलत्वाद्वायोः, महः पिपीलैकासम्प्रचार इवाङ्गेषु, तोदभेदस्फरणायामसङ्कोचसप्तिहर्षप्रलयोदयबहलः; तदातुरः सूचयेव शेष्कनेव चाभिसंविदधमात्मानं मन्यते, अपि च दिवसान्ते ज्वर्यते शुष्यति चास्यास्यैम्, उच्छ्वासश्चोपरुद्यते, हृष्यन्ति चास्य रोमाणि वेदनायाः प्रादुर्भवे:प्लीहाटोपान्त्रकूजनाविपाकोदावर्ताङ्गमर्दमन्याशिरःशङ्खशूलब्रह्मनरोगाशैनमपद्रवन्ति; कृष्णारुणपरुषत्वङ्नखनेयनवदनमूत्रपुरीषश्च भवति, निदानोक्तानि चास्य नोपशेरते, वैपरीतानि चौपशेरत इति वातगुल्मः||७||

sa prakupitō vāyurmahāsrōtō'nupraviśya raukṣyāt kāṭhinībhūtamāplutya [6]  
piṇḍitō'vasthānāṁ karōti hr̄di bastau pārśvayōrnābhyaṁ vā; sa  
śūlamupajanayatigranthīṁścānēkavidhān, piṇḍitaścāvatiṣṭhatē, sa piṇḍitatvād 'gulma'  
ityabhidhīyatē; sa muhuraldhāmati [7] , muhuralpatvamāpadyatē;  
aniyatavipulāṇuvēdanaścabhavati calatvādvāyōḥ, muhuḥ pipīlikāsampracāra ivāṅgēṣu,  
tōdabhēdasphuraṇāyāmasaṅkōcasuptiharṣapralayōdayabahulāḥ; tadāturaḥ sūcyēva  
śāṅkunēvacābhisaṁviddhamātmānaṁ manyatē, api ca divasāntē jvaryatē [8] , śuṣyati

cāsyāsyam, ucchvāsaścōparudhyatē, hṛsyanti cāsyā rōmāni vēdanāyāḥ  
prādurbhāvē; plīhāṭopāntrakūjanāvipākōdāvartāṅgamardamanyāśirahśaṅkhaśūlabradhn  
arōgāścainamupadravanti;  
kṛṣṇāruṇaparuṣatvaṅnakhanayanavadanamūtrapurīśaścabhavati, nidānōktāni cāsyā  
nōpaśēratē, viparītāni cōpaśērata iti vātagulmaḥ||7||

Sa prakupito vAyurmahAsroto~anupravishya raukShyAt kaThinIbhUtamAplutya  
piNDito~avasthAnaM karoti hRudi bastau pArshvayornAbhyAM vA; sa  
shUlamupajanayati granthIMshcAnekavidhAn, piNDitashcAvatiShThate, sa piNDitatvAd  
‘gulma’ ityabhidhlyate; samuhurAdhamati muhuralpatvamApadyate;  
aniyatavipulANuvedanashca bhavati calatvAdvAyoH, muhuH pipillikAsampracAra  
ivA~ggeShu, todabhedasphuraNAyAmasa~gkocasuptiharShapralayodayabahulaH;  
tadAturaH sUcyeva sha~gkuneva cAbhisamviddhamAtmAnaM manyate, api ca divas  
Ante jvaryate shuShyati cAsyAsyam, ucchvAsashcoparudhyate, hRuShyanti cAsya  
romANi vedanAyAH prAdurbhAve;  
pllhATopAntrakUjanAvipAkodAvartA<sub>ggamardamanyAshirahsha</sub>gkhashUlabradhnarogAshcainamu  
padravanti; kRuShNAruNaparuShatva~gnakhanayanavadanamUtrapuriShashca  
bhavati, nidAnoktAni cAsya nopasherata, viparItAni copasherata iti VatagulmaH||7||

Such vitiated *vata*, on entering the *mahasrotas*, hardens due to dryness forming a mass or swelling localised in the regions of heart, urinary bladder, sides and the navel. The condition, *gulma* (or *vata gulma*), is painful and can take the shape of a single swelling or multiple nodules of various types. It sometimes gets aggravated and enlarged, sometimes diminished, and causes mild or severe pain due to instability of *vayu*. Sometimes there are tingling sensations like ants crawling on body and frequent onset and diminution of various types of painful sensations such as piercing, breaking, twitching, extension, contraction, numbness, hyperesthesia, etc. These sensations could be accompanied by a rise in temperature usually in the evenings, dryness of mouth, difficulty in expiration, horripilation at the onset of pain and complications such as spleen (enlargement), distension and gurgling sound in the abdomen, indigestion, *udavarta* (upward movement of *vata*), bodyache, pain in the lateral side of the neck, head and temple regions and *bradhana* (swellings of the inguinal region) with appearance of blackness, reddishness and roughness in skin, nails, eyes, face, urine and feces. The disease aggravates due to these etiological factors and pacifies due to opposite factors. These are characteristic features of *vata gulma*. [7]

### *Pitta-dominant gulma*

तैरेव तु कर्शनैः कर्शितस्याम्ललवणकटुकक्षारोष्णं तीक्ष्णं शुक्तव्यापन्नं मद्यहरितकफलाम्लानं  
विदाहिनां च शाकधान्यं मांसादीनामुपयोगादजीर्णाद्यशनाद्रौक्ष्यानुगते चामाशये वमनमतिवेलं सन्धारणं  
वातातपौ चातिसेवमानस्य पित्तं सह मारुतेन प्रकोपमापद्यते॥८॥

tairēva tu karśanaiḥ  
karśitas�ाम्लalavaṇaṅakaṭukakṣārōṣṇatīkṣṇaśuktavyāpannamadyaharitakaphalāmlānāṁ  
vidāhināṁ caśākadhānyamāṁsādīnāmupayōgādajīrṇādhyaśānādraukṣyānugatē

cāmāśayē vamanamativēlaṁ [10] sandhāraṇaṁ vātātapau cātisēvamānasya pittam  
sahamārutēna prakōpamāpadyatē||8||

Taireva tu karshanaiH karshitasyAmlalavaNa kaTukakShAroShNatlkShNashuktavy  
AppannamadyaharitakaphalAmIAnAM vidAhinAM ca shAkadhAnyamAMsAdIn  
AmupayogAdajIrNAdhyashanAdraukShyAnugate cAmAshaye vamanamativelaM  
sandhAraNaM Vatatapau cAtisevamAnasya pittaM saha mArutena  
prakopamApadyate||8||

If a person, weakened by ailments or various etiological factors (as mentioned above in verse 6), uses sour, salty, pungent, and alkaline substances with hot and sharp potency, vinegar, improperly prepared or denatured alcoholic drinks, salads, sour fruits and acidic vegetables, grains, meat etc., takes food during indigestion, is administered emesis when *amashaya* is dry (or not properly oleated), suppresses natural urges for long, or is exposed excessively to the sun and wind, his *pitta* along with *vata* gets vitiated or aggravated. [8]

तत् प्रकपितं मारुत आमाशयैकदेशे संवर्त्य तानेव वेदनाप्रकारानुपजनयति, य उक्ता वातगुल्मे; पित्तं त्वेनं  
विद्हत्ति कुक्षौ हृद्युरसि कण्ठे च; स विद्हयमानः सधूममिवोदगारमुद्गिरत्यम्लान्वितं,  
गुल्मावकाशश्चास्य दह्यते दूयते धूप्यते ऊष्मायते स्विद्यति क्लिद्यति शिथिल इव  
स्पर्शासहोऽल्परोमाञ्चश्च भवति; ज्वरभ्रमदवथ्यपिपासागलतालुमुखशोषप्रमोहविड्भेदाश्चैनमुपद्रवन्ति;  
हरितहारिद्रव्यवृन्दनखनयनवदनमूत्रपुरीषश्च भवति; निदानोक्तानें चास्य नोपशेरते, विपरीतान्युपशेरत  
इति पित्तगुल्मः||९||

tat prakupitaṁ māruta āmāśayaikadēśē saṁvartya [11] tānēva  
vēdanāprakārānupajanayati, ya uktā vātagulmē; pittam tvēnaṁ vidahati kukṣau  
hṛdyurasi kanṭhē ca; savidahyamānah sadhūmamivōdgāramudgiratyamlānvitaṁ,  
gulmāvakāśaścāsyā dāhyatē dūyatē dhūpyatē [12] ūṣmāyatē svidyati klidyati śīthila [13]  
ivasparśāsahō'lpārōmāñcaśca [14] bhavati;  
jvarabhrāmadavathupipāsaṅgalatālumukhaśōṣapramōhaviḍbhēdāścainamupadravanti; h  
aritahāridratvaṅnakhanayanavadanamūtrapurīśca bhavati; nidānōktāni cāsyā  
nōpaśēratē, viparītānyupaśērata iti pittagulmaḥ||9||

tat prakupitaM mAruta AmAshayaikadeshe saMvartya tAneva  
vedanAprakArAnupajanayati, ya uktA Vatagulme; pittaM tvenaM vidahati kukShau  
hRudyurasi kaNThe ca; sa vidahyamAnaH sadhUmamivodgAramudgiratyamlAnvitaM,  
gulmavakAshashcAsya dāhyate dUyate dhUpyate UShmAyate svidyati klidyati shithila  
iva sparshAsaho<sub>alparomA</sub>jcashca bhavati;  
jvarabhrāmadavathupipAsAga latAlumukhashoShapramohaviDbhedAshcainamupadrav  
anti; haritahAridratva~gnakhanayanavadanamUtrapuriShashca bhavati; nidAnoktAni  
cAsya nopasherate, viparItAnyupasherata iti pittagulmaH||9||

Aggravated *vata*, along with vitiated *pitta*, gets (completely or partially) collected in the *amashaya* and produces the same types of pain as mentioned for *vata gulma*. Due to aggravation of *pitta* in certain cases, the patient feels a burning sensation (with hyperacidity) in the belly, cardiac region, chest and throat while letting out smoky and sour eructations at the same time. In the location of *gulma*, there is burning sensation,

pain, sensations of fuming, sweating and moistening, laxity, tenderness and slight horripilation. The patient could exhibit symptoms such as fever, giddiness, burning pain, thirst, dryness of throat, palate and mouth, fainting and diarrhea, and develops greenish or yellowish discoloration of skin, nails, eyes, face, urine and feces. The disease aggravates due to these etiological factors and pacifies due to opposite factors. This variant of *gulma* is called *pitta gulma*. [9]

### *Kapha-dominant gulma*

तैरेव तु कर्शनैः कर्षितस्यात्यशनादतिस्निग्धगुरुमधरशीताशनात्  
पिष्टेक्षुक्षीरतिलमाषगुडविकृतिसेवनान्मन्दकमद्यातिपानादूरितकातिप्रणनयादानूपौदकग्राम्यमांसाति  
भक्षणात् सन्धारणाद्बुभुक्षस्य चातिप्रगाढमुदपानात् सङ्क्षोभणाद् शरीरस्य श्लेष्मा सह मारुतेन  
प्रकोपमापद्यते॥१०॥

tairēva tu karśanaiḥ

karśitasyaśānādatisnigdhagurumadhuraśītāśanātpiṣṭekṣukṣīratilamāṣaguḍavikṛtisēv  
anānmandakamadyātipānāddharitakātiprāṇayanādānūpauḍakagrāmyamāṁsātibhak  
śaṇāt [16] sandhāraṇādabubhukṣasya [17]cātipragāḍhamudapānāt saṅkṣōbhāṇādvā  
śarīrasya ślēṣmā saha mārutēna prakōpamāpadyatē॥10॥

Taireva tu karshanaiH karshitasyAtyashanAdatisnigdhagurumadhurashItAshanAt  
piShTekShukShIratilamAShaguDavikRutisevanAnmandakamadyAtipAnAddharitakAtipra  
NanayAdAnUpaudakagrAmyamAMsAtibhakShaNAAt sandhAraNAAdabubhukShasya  
cAtipragADhamudapAnAt sa~gkShobhaNAdvA sharlrasya shleShmA saha mArutena  
prakopamApadyate॥10॥

If a person weakened by diseases or aforesaid factors (in verse 6) takes too much unctuous, heavy, sweet and cold things, habitually takes preparations of (rice) flour, sugarcane, milk, sesame, black gram and coarse, unrefined sugar (jaggery), uses excessively immature curd, alcoholic drinks, salads, eats meat of marshy, aquatic and domesticated animals in excessive quantities, suppresses natural urges, drinks too much water when hungry, or is subjected to excessive shaking of the body (caused by travelling on rough roads, etc.), his *kapha* along with *vata* gets vitiated or aggravated. [10]

तं प्रकुपितं मारुत आमाशयैकदेशे संवर्त्य तानेव वेदनाप्रकारानुपजनयति य उक्ता वातगुल्मे; श्लेष्मा  
त्वस्य शीतज्वरारोचकाविपाकाङ्गमर्द हष्टहृद्रोगच्छर्दिनिद्रालस्यस्तैभित्यगौरवशिरोभितापानुपजनयति,  
अपि च गुल्मस्यस्थैर्यगौरवकाठिन्यावगाढसप्तता:, तथाकासश्वासप्रतिश्यायान् राजयक्षमाण  
चातिप्रवृद्धः, श्वैत्यं त्वं नखनयनवदनमुत्पुरीषेषूपजनयति, निदानोक्तानि चास्य नोपशेरते,  
विपरीतानि चोपशेरत इति श्लेष्मगुल्मः॥११॥

tar̄m prakupitar̄m māruta āmāśayaikadēśē sar̄nvartya [18] tānēva  
vēdanāprakārānupajanayati ya uktā vātagulmē; ślēṣmā  
tvasyaśītajvarārōcakāvipākāṅgamardaharṣahṛdrōgacchardinidrālasyastaimityagauravaś  
irōbhītāpānupajanayati, api ca gulmasyasthairyagauravakāṭhinyāvagāḍhasuptatāḥ,  
tathā kāsaśvāsapratiśyāyān rājayakṣmāṇam cātipravṛddhah,

śvāityam̄tvāñnakhanayanavadanamūtrapurīśeśūpajanayati, nidānōktāni cāsyā  
nōpaśēratē, viparītāni cōpaśērata iti ślēśmagulmaḥ||11||

taM prakupitaM mAruta AmAshayaikadeshe saMvartya tAneva  
vedanAprakArAnupajanayati ya uktA Vatagulme; shleShmA tvasya  
shItajvarArocakAvipAkA~ggamardaharShahRudrogacchardinidrAlasyastaimityagaurava  
shirobhitApAnupajanayati, api ca gulmasya  
sthairyagauravakATHinyAvagADhasuptatAH, tathA kAsashvAsapratishyAyAn  
rAjayakShmANaM cAtipravRuddhaH, shvaityaM  
tva~gnakhanayanavadanamUtrapurISheShUpajanayati, nidAnoktAni cAsya  
nopasherate, viparItAni copasherata iti shleShmagulmaH||11||

Such aggravated *vata* along with vitiated *kapha*, when accumulated in the *amashaya* (upper part of abdomen) region or a part of it, causes the same types of painful symptoms as mentioned for *vata gulma*. *Kapha* causes fever accompanied with cold sensation, anorexia, indigestion, bodyache, horripilation, heart disease, vomiting, excess sleep, lassitude, sweating, and a feeling of heaviness and distress in the head. In the region where the *gulma* is located, there is fixity, heaviness, hardness, and numbness. Complications could occur such as cough, dyspnoea, coryza and even tuberculosis in much advanced stages. In terms of physical appearance, the patient develops whiteness in skin, nails, face, urine and feces. The disease aggravates due to these etiological factors and pacifies due to opposite factors. This variant of *gulma* is called *kapha gulma*. [11]

### *Tridosha dominant gulma*

त्रिदोषहेतुलिङ्गसन्निपाते तु सान्निपातिकं गुल्ममुपदिशन्ति कुशलाः। स विप्रतिषिद्धोपक्रमत्वादसाध्यो  
निचयगुल्मः॥१२॥

tridōṣahētuliṅgasannipātē tu sānnipātikam̄ gulmamupadiśanti kuśalāḥ| sa  
vipratiṣiddhōpakramatvādasādhyō [19] nicayagulmaḥ||12||

Tu sAnnipAtikaM gulmamupadishanti kushalAH| sa  
vipratiShiddhopakramatvAdasAdhyo nicayagulmaH||12||

When the symptoms of three *doshas* are exhibited, a *gulma* patient is said to be ailing from *sannipatika gulma*. This condition is incurable. [12]

### *Shonita gulma*

शोणितगुल्मस्तु खलु स्त्रिया एव भवति न पुरुषस्य, गर्भकोष्ठार्तवागमन वैशेष्यात्।  
पारतन्त्र्यादवैशारद्यात् सततमुपचारानुरोधाद् वा वेगानुदीर्णानुपरन्धत्या आमगर्भे  
वाऽप्यचिरपतितेऽथवाऽप्यचिरप्रजातायां ऋतौ वा वातप्रकोपणान्यासेवमानायाः क्षिप्रंवातः  
प्रकोपमापद्यते॥१३॥

śōṇitagulmastu khalu striyā ēva bhavati na puruṣasya,  
garbhakōṣṭhārtavāgamanavaiśeṣyāt| pāratantryādavaiśāradyāt  
satatamupacārānurōdhādvā vēgānudīrṇānuparundhatyā āmagarbhe

vā'pyacirapatitē'thavā'pyaciraprajātāyā ḫtau vāvātaprakōpaṇānyāsēvamānāyāḥ kṣipram  
vātāḥ prakōpamāpadyatē||13||

khalu striyA eva bhavati na puruShasya, garbhakoShThArtavAgamanavaisheShyAt|  
pAratantryAdavaishAradyAt satatamupacArAnurodhAdvA vegAnudIrNAnuparundhatyA  
Amagarbhe vA<sub>apyacirapatis</sub>athavA~apyaciraprajAtAyA Rutau vA  
VataprakopaNAnyAsevamAnAyAH kShipraM VataH prakopamApadyate||13||

*Shonita* or *raktagulma* occurs specifically only in women and not in men because of presence of uterus and menstrual flow in the former. In woman, who suppress their natural urges because of dependence, ignorance or a constant attendance to service of others or uses *vata* aggravating substances soon after abortion, delivery or during menstruation, *vata* gets vitiated or aggravated quickly. [13]

स प्रकुपितो योनिमखमनप्रविश्यार्तवमपरुणदधि, मासि मासि तदार्तवमपरुद्यमानं |कुक्षिमभिवर्धयति|  
तस्या: शूलकासातींसारच्छर्दयरोचकाविपाकाङ्गमर्दनिद्रालस्यस्तैमित्युक्तप्रसेकाः समुपजायन्ते,  
स्तनयोश्च स्तन्यम्, ओष्ठयोः: स्तनमण्डलयोश्च काष्ठर्यम्, अत्यर्थं ग्लानिश्चक्षुषोः, मूर्च्छा, हृल्लासः,  
दोहदः, श्वयथुश्च पादयोः, ईषच्चोदगमो रोमराज्याः, योन्याश्चाटालत्वम्, अपि च योन्या  
दौर्गन्धयमास्रावश्चोपजायते, केवलश्चास्या गुल्मः पिण्डित एव स्पन्दते, तामगर्भा  
गर्भिणीमित्याहुर्मूढाः||१४||

sa prakupito yonimukhamanupravishyArtavamuparuNaddhi, mAsi mAsi  
tadārtavamuparudhyamānāṁ kukṣimabhividhayati] tasyāḥ  
śūlakāsātīśāracchardyarōcakāvipākāṅgamardanidrālasyastaimityakaphaprasēkāḥ  
samupajāyantē, stanayōśca stanyam, oṣṭhayōḥ stanamaṇḍalayōścakāṛṣṇyam,  
atyartham glāniścakṣuṣōḥ, mūrcchā, hṛllāsaḥ, dōhadāḥ, śvayathuśca pādayōḥ,  
śaccōdgamō rōmarājyāḥ, yonyāścāṭālatvam, api ca  
yonyādaurgandhyamāsrāvāścōpajāyatē, kēvalaścāsyā gulmaḥ piṇḍita ēva spandatē,  
tāmagarbhāṁ garbhīṇīmityāhurmūḍhāḥ||14||

sa prakupito yonimukhamanupravishyArtavamuparuNaddhi, mAsi mAsi  
tadArtavamuparudhyamAnaM kukShimabhividhayati] tasyAH  
shUlakAsAtIsAracchardyarocakAvipAkA~ggamardanidrAlasystaimityakaphaprasekAH  
samupajAyante, stanayoshca stanyam, oShThayoH stanamaNDalayoshca kArShNyam,  
atyartham glAnishcakShuShoH, mUrcchA, hRullAsaH,dohadaH, shvayathushca  
pAdayoH, IShaccodgamo romarAjyAH, yonyAshcATAlatvam, api ca yonyA  
daurgandhyamAsrAvashcopajAyate, kevalashcAsyA gulmaH piNDita eva spandate,  
tAmagarbhAM garbhIṇīmityAhurmo UDhAH||14||

This vitiated *vata* gets into the cervico-vaginal canal and checks the menstrual flow. If this continues for a prolonged period, the menstrual blood being obstructed accumulates and enlarges the abdomen. The patient consequently suffers from pain, cough, diarrhea, vomiting, anorexia, indigestion, bodyache, excess sleep, lassitude, dampness, and excessive salivation. There occurs appearance of milk in breasts, dark coloration of lips and areolar region, excessive heaviness in eyes, fainting, nausea, longing for certain food articles as seen during pregnancy, swelling in feet, dilatation of the vaginal orifice and foul smelling discharge from the vagina. There is pulsation in the

entire mass of *gulma*, confusing the patient (or her attendants) into thinking that she is pregnant. [14]

### Prodormal symptoms

एषां तु खल पञ्चानां गल्मानां प्रागभिनिर्वृतेरिमानि पूर्वरूपाणि भवन्ति; तद्यथा-अनन्नाभिलषणम्, अरोचकाविपाकौ, अग्निवैषम्यं, विदाहो भुक्तस्य, पाककाले चायुक्त्या छर्दयुदगारौ, वातमूत्रपुरीषवेगानां चाप्रादुर्भावः, प्रादुर्भूतानां चाप्रवृत्तिरीषदागमनं वा, वातशूलाटोपान्त्रकूजनापरिहर्षणातिवृत्पुरोषताः, अबुभुक्षा, दौर्बल्यं, सौहित्यस्य चासहत्वमिति॥१५॥

ēśāṁ tu khalu pañcānāṁ gulmānāṁ prāgabhinirvṛttērimāni pūrvarūpāṇi bhavanti;  
tadyathā- anannābhilaṣanām, arōcakāvipākau, agnivaiṣamyaṁ, vidāhō  
bhuktasya,pākakālē cāyuktyā chardyudgārau, vātamūtrapurīṣavēgānāṁ  
cāprādurbhāvah, prādurbhūtānāṁ cāpravṛttirīṣadāgamanāṁ  
vā,vātaśūlāṭopāntrakūjanāparihaṣanātivṛttapurīṣatāḥ, abubhukṣā, daurbalyam,  
sauhityasya cāsaḥatvamiti॥१५॥

eShAM tu khalu pa~jcAnAM gulmanAM prAgabhinirvRutterimAni pUrvarUpANI  
bhavanti; tadyathA-anannAbhilaShaNam, arocakAvipAkau, agnivaiShamyAM, vidAho  
bhuktasya, pAkakAle cAyuktyA chardyudgArau, VatamUtrapurlShavegAnAM  
cAprAdurbhAvaH, prAdurbhUtAnAM cApravRuttirIShadAgamaNA M vA,  
VatashUIATopAntrakUjanApariharShaNAativRuttapurlShatAH, abubhukShA, daurbalyaM,  
sauhityasya cAsahatvamiti॥१५॥

These five types of *gulma* have the following prodormal symptoms just prior to occurring: aversion to food, anorexia and indigestion, disturbed metabolism, burning sensation after taking meals, vomiting and unusual eructations, reduced urge for flatus, urine and bowel movements, pain, distension, gurgling sound, horripilation and diarrhea due to *vata*, loss of appetite, debility, and inability to endure satiety. [15]

### Prognosis and general principles of management

सर्वेषपि खल्वेतेषु गुल्मेषु न कश्चिद्वातादते सम्भवति गुल्मः। तेषां सान्निपातिकमसाध्यं जात्वा  
नैवोपक्रमेत, एकदोषजे तु यथास्वमारम्भं प्रणयेत, संसृष्टास्तु साधारणेन कर्मणोपचरेत्।  
यच्चान्यदप्यविरुद्धं मन्येत तदप्यवचारयेद् विभज्य गुरुलाघवमपद्रवाणां,  
गुरुनपद्रवास्त्वरमाणश्चिकित्सेऽजग्न्यमितरान्। त्वरमाणस्त विशेषमनपलभमानो गल्मेष्वात्ययिके  
कर्मणे वातचिकित्सितं प्रणयेत, स्नेहस्वेदौ वातहरौ स्नेहोपसौहितं च मदु विरेचनं बस्तौश्च;  
अम्ललवणमधुरांश्च रसान् युक्त्याऽवचारयेत्। मारुते हयुपशान्ते स्वल्पनापि प्रयत्नेन शक्योऽन्योऽपि  
दोषो नियन्तु गुल्मेष्विति॥१६॥

sarvēṣvapi khalvētēṣu gulmēṣu na kaścidvātādṛtē sambhavati gulmah। tēśāṁ  
sānnipātikamasādhyam jñātvā naivōpakramēta, ēkadōṣajē tu yathāsvamārambham  
praṇayēt, saṁsṛṣṭāṁstu sādhāraṇēna karmaṇōpacarēt। yaccānyadapyaviruddham  
manyēta tadapyavacārayēdvibhajya gurulāghavamupadravāṇāṁ,  
gurūnupadravāṁstvaramāṇaścikitsējjaghanyamitarān। tvaramāṇastu  
viśēṣamanupalabhamānō gulmēṣvātyayikē karmani vātacikitsitam praṇayēt,  
snēhasvēdau vātaharau snēhōpasāṁhitam ca mṛdu virēcanam

bastīṁśca; amlalavaṇamadhuरāṁśca rasān yuktyā'vacārayēt| mārutē hyupaśāntē  
svalpēnāpi prayatnēna śakyō'nyō'pi dōṣō niyantuṁ gulmēśviti||16||

sarveShvapi khalveteShu gulmeShu na kashcidVataRute sambhavati gulmaH| teShAM  
sAnnipAtikamasAdhyaM j~jAtvA naivopakrameta, ekadoShaje tu yathAsvamArambhaM  
praNayet, saMsRuShTAMstu sAdhAraNena karmaNopacaret|  
yaccAnyadapyaviruddhaM manyeta tadapyavacArayedvibhajya  
gurulAghavamupadravANAM, gurUnupadravAMstvaramANashcikitsejjaghanyamitarAn|  
tvaramANastu visheShamanupalabhamAno gulmeShvAtyayike karmaNi VatacikitsitaM  
praNayet, snehasvedau Vataharau snehopasaMhitam ca mRudu virecanam  
bastIMshca; amlalavaNamadhurAMshca rasAn yuktyA~avacArayet| mArute  
hyupashAnte svalpenApi prayatnena shakyo<sub>anyo</sub>api doSho niyantuM gulmeShviti||16||

As is evident from the descriptions of *gulma*, no variant is caused without vitiation of *vata*. Amongst these variants, *sannipatika gulma* is incurable and should not be treated. The variant caused by just one *dosha*, should be treated with suitable therapeutics prescribed for respective *dosha*. Those caused by a combination of two *doshas* (*vata – pitta* or *vata – kapha*) should be managed with the general therapeutic measures applicable to *dwidoshic* ailments. The measures that are not contrary to the *dosha* can be applied according to severity of complications. In case of emergency situations, the measures applicable in treatment of *vata gulma*, such as *vata*-alleviating unction, fomentation, mild unctuous purgation, enema, and use of sweet, sour and salty substances should be administered. If *vata* is pacified, then the disease can be cured even with little efforts and other types of *gulma* can also be treated. [16]

भवति चात्र- गुल्मिनामनिलशान्तिरूपायैः सर्वशो विधिवदाचरितव्या| मारुते हयवजितेऽन्यमुदीर्णं  
दोषमल्पमपि कर्म निहन्यात्||१७||

bhavati cātra- gulmināmanilaśāntirupāyaiḥ sarvaśō vidhivadācaritavyā| mārutē  
hyavajite'nyamudīrṇāṁ dōṣamalpamapi karma nihanyāt||17||

bhavati cAtra- gulminAmanilashAntirupAyaiH sarvasho vidhivadAcaritavyA| mArute  
hyavajite~anyamudIrnAM doShamalpamapi karma nihanyAt||17||

In the case of *gulma*, all the measures for pacification of *vata* should be administered properly because after *vayu* is controlled over, other aggravated *doshas* can be alleviated even with small remedies. [17]

## Summary

तत्र श्लोकः- सङ्ख्या निमित्तं रूपाणि पूर्वरूपमथापि च| दिष्टं निदाने गुल्मानामेकदेशश्च कर्मणाम्||१८||

tatra ślōkaḥ- saṅkhyā nimittāṁ rūpāṇi pūrvarūpamathāpi ca| diṣṭāṁ nidānē  
gulmānāmēkadēśāśca karmaṇām||18||

Tatra shlokaH- sa~gkhyA nimittaM rUpANi pUrvarUpamathApi ca| diShTaM nidAne  
gulmanAmekadeshashca karmaNAm||18||

Now, to summarize:

In the chapter on diagnosis of *gulma* the number, causative factor, symptoms and prodromal symptoms along with a portion of treatment of *gulmas* have been described.[18]

इत्यग्निवेशकृते तन्त्रे चरकप्रतिसंस्कृते निदानस्थाने गुल्मनिदानं नाम तृतीयोऽध्यायः॥३॥

ityagnivēśakṛtē tantrē carakapratisaṁskṛtē nidānasthānē gulmanidānam nāma  
tṛtīyō'dhyāyah॥३॥

ityagniveshakRute tanre carakapratisaMskRute nidAnasthAne gulmanidAnaM  
nAma tRutlyo~adhyAyaH॥३॥

Thus ends the third chapter on the diagnosis of *gulma* in the treatise composed by Agnivesha and redacted by Charak.

## Tattva Vimarsha (Fundamental Principles)

- *Gulma* is a disease of the *mahastrotas* (gastro-intestinal tract/abdomen) and is caused due to predominance of *vata*. It is of five types depending upon its location (limited to the gastro-intestinal region between the heart and the bladder). Four types of *gulma* are common to both males and females while the fifth, *raktaja gulma*, is a condition limited to females.
- *Gulmas* also vary by the vitiation of other doshas besides *vata*. The *sannipitaka gulma*, caused by vitiation of all three *doshas*, is said to be incurable.
- A primary feature of *gulma* is obstruction to the path of *vata*, which can be due to causes like tumor, stricture, inflammation, tuberculosis, parasites, etc.
- *Gulma* with acute symptoms should have urgent relief of *vata* obstruction.
- Treatment of *vata gulma* includes *vata*-alleviating unction, fomentation, mild unctuous purgation, enema, and use of sweet, sour and salty substances. If *vata dosha* is pacified in *gulma* disease, then other two *dosha* can also be controlled.

## Vidhi Vimarsha (Applied Inferences)

A comprehensive effort has been made in Ayurveda to describe different types of swellings occurring in the body e.g. *gulma*, *udara roga*, *vridhhi roga*, *granthi*, *arbuddha*, *shopha*, and *vidradhi*, etc. They can be distinguished from each other according to their specific characteristics as written in different classics of Ayurveda. Generalized abdominal swellings have been described under the heading of *udara roga* (abdominal diseases including ascitis), while localized, non-suppurated swellings are *gulmas*. Other localized swellings, such as *vridhhi roga* (hernia and hydrocele), have also been described by ancient authors but such swellings are in regions other than the gastro-intestinal region, or in parts of the body such as the scrotal and inguinoscrotal region.

*Shopha* is a localized inflammatory swelling. *Vidradhi* (abscess) are also localized but large suppurative lesions and are deep - rooted that may develop either from external

surfaces or internal body cavities. *Granthi* (cyst) and *arbuda* (tumor) are also localized, progressively increasing knotty lesions and are primarily non suppurative in nature. Such swellings may arise in any part of the body and are commonly known as neoplastic lesions.

### Etiopathogenesis of *gulma*

In Charak Samhita, vitiated *vata dosha* is considered as major etiological factor for the development of any type of *gulma*.[Cha.Sa.Chikitsa Sthana 28/58] Among the five types of *vata* mentioned in Charak Samhita, vitiated *apana* and/or *samana vata* seem to be the primary etiological factors of *gulma*, since these are mainly responsible for the normal physiological functions of *mahastrotas*. The prodromal symptoms of *gulma* also point towards these two e.g. aversion to food, anorexia, and diminished urge to pass flatus, urine and feces.

In Chikitsa Sthana, Charak states that *vata* gets vitiated by two basic means i.e. *dhatukshaya* (tissue wasting) and *margavarana* (obstruction). The etiology given in this chapter could also include excess consumption of food with *ruksha guna*, trauma and faulty *shodhana* procedures, excessive loss of *mala* and *dhatu* responsible for *dhatukshaya* and various other factors that vitiate *doshas* and *mala* causing obstruction of different channels, further aggravating *vata*.

While analysing the definition given by various Acharyas regarding *gulma* it can be stated that it is the clinical condition in which only solidification of *doshas* give rise to *gulma*. It is believed that, for the development of any other disease, vitiated *dosha(s)*, together with *dushya* need to accumulate at a specific site leading to development of the disease. Therefore for the development of any disease, a combination of *dosha* and *dushya* is critical. However for *gulma*, only vitiated *doshas* are responsible and there is no involvement of *dushya*. This is a unique feature of pathogenesis of *gulma*. Sushruta has explained further that just as water bubbles appear and disappear when rain drops fall on water, *gulmas* appear and disappear.

Also, in the absence of any *dushya* (*dhatu* and *mala*), these swellings are commonly non-suppurative in nature.<sup>310</sup> There are, however, some cases where suppuration may take place. For example, in Chikitsa Sthana, Charak has mentioned that suppuration may takes place in *pittaja gulma* and further elaborates the various stages of suppuration of *gulma* i.e. *ama* (immature or initial stage), *pachyamana* (intermediary stage) and *pakwa awastha* (final mature stage) etc. similar to the stages seen in various suppurative conditions like *vidradhi*. Chakrapani commented that when the *pitta gulma* is not treated timely, *pitta dosha* and *rakta dhatu* get aggravated (together or separately), and involves the deeper structure (*kritmulam*).

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<sup>310</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

## *Shadkriyakala* (lifecycle) of *Gulma*

1. *Sanchaya-Vata* accumulates in *vastasthana* (*pakwashaya*, or the intestines) with the consumption of *vatika* food and activities such as excessive exercise, suppressing emergent urges etc., further aggravating it.
2. *Prakopa-* Consumption of *ruksha*, *khara* and *sheeta* food for prolonged periods of time reduces the *snigdha* quality of **strotas** while stimulating excess *vata* to overflow from its *sthana*.
3. *Prasara-*In this stage aggravated *vata* dislodges from its accumulated site and spreads all over the body.
4. *Sthanasantshraya-* This is the stage in which the *dosha* stays at a particular locus and comes in contact with *dushya*. In case of *gulma*, the *mahastrotas* are the principal loci, with an absence of *dushya* in their formation. The vitiated *vata* and other *doshas* have an affinity towards specific loci such as *hridaya*, *nabhi*, *basti* etc. to get lodged there. Prodromal symptoms of *gulma* such as anorexia, aversion for food, weakness etc. also become apparent at this stage.
5. *Vyakti-* Clinical features of different types of *gulma* manifest at this stage so management can be done depending upon specific *dosha* characteristics.
6. *Bheda-*When the *gulma* is not treated at the fourth and fifth stage, complications like *bradhna roga* (inguinal swelling), *jwara* (fever), *vidbheda* (loose stools/diarrhea), and suppuration (in case of *pittaja gulma*) occur where surgical intervention could be necessary.

## *Location of gulma*

With respect to the *adhishthana* (location) of *gulma*, five major sites have been mentioned [Cha.Sa. Chikitsa Sthana 5/8], including the *hridaya*, *nabhi*, *basti*, and *parshwadwaya* (flanks). In the context of this chapter, *hridaya* should be taken as the upper part of the abdominal cavity rather than the thoracic cage as described in Sharira Sthana. *Vata gulma* most commonly occurs in *basti*, while *pitta gulma* occurs most commonly in the *nabhi* region, and *kapha gulma* in the *hridaya* and *parshwadwaya* regions.<sup>311</sup> The *yakrita gulma* occurs in the region of *hridaya*, *ashtheela gulma* in the region of *kukshi* (hypogastrium), *pleeha gulma* in the *madhya* (central) region, *chandravardhaka gulma* in the region of *basti*, and *granthi gulma* afflicts the region of *nabhi*.<sup>312</sup>

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<sup>311</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

<sup>312</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

The pathogenesis of *pittaja* and *kaphaja gulma* takes place in *amashaya* that lies in the region between *hridaya* and *basti* [Chakrapani on Cha.Sa.Nidana Sthana 03]. Thus these two variants of *gulma* (i.e., *pittaja* and *kaphaja*) cannot occur in *basti*. The five sites of *gulma* can be mapped to the following anatomical sites of the abdomen:

| Types of<br><i>gulma</i> | <i>Adhisthana</i>                     | Anatomical site                      | <i>Charak</i>     | <i>Sushruta</i>  | <i>Vagbhat</i> | <i>Harita</i> |
|--------------------------|---------------------------------------|--------------------------------------|-------------------|------------------|----------------|---------------|
| <i>Vataja</i>            | <i>Basti</i>                          | Lower abdomen                        | Does not specify  | Does not specify | Same           | Not mentioned |
| <i>Pittaja</i>           | <i>Nabhi</i>                          | Mid-abdomen                          | Does not specify  | Does not specify | Same           | Not mentioned |
| <i>Kaphaja</i>           | <i>Hridaya</i>                        | Upper-abdomen                        | Does not specify  | Does not specify | Same           | Not mentioned |
|                          |                                       | <i>parshwa</i><br><i>dwaya(d</i>     | right<br>and left |                  |                |               |
|                          |                                       | <i>akshina</i>                       | flank             |                  |                |               |
|                          |                                       | <i>parshwa</i><br>and<br><i>vama</i> |                   |                  |                |               |
|                          |                                       | <i>parshwa</i><br>)                  |                   |                  |                |               |
| <i>Shonitaja</i>         | <i>Garbhashaya</i><br>and <i>yoni</i> | Uterus and vagina                    | Same              | Same             | Same           | Not mentioned |
| <i>Sannipatija</i>       | Not specified                         | Not specified                        | Not specified     | Not specified    | Not specified  | Not mentioned |
| <i>Yakrita gulma</i>     | <i>Hridaya</i>                        | Upper abdomen                        | Not mentioned     | Not mentioned    | Not mentioned  | Same          |
| <i>Ashtheela gulma</i>   | <i>Kukshi</i>                         | Mid-abdomen                          | Not mentioned     | Not mentioned    | Not mentioned  | Same          |
| <i>Pleeha gulma</i>      | <i>Madhya bhaga</i>                   | Mid-abdomen                          | Not mentioned     | Not mentioned    | Not mentioned  | Same          |
| <i>Chandravivardh</i>    | <i>Basti</i>                          | Lower-abdomen                        | Not mentioned     | Not mentioned    | Not mentioned  | Same          |

| Types of<br><i>gulma</i> | <i>Adhisth<br/>ana</i> | Anatomical site  | <i>Charak</i> | <i>Sushrut<br/>a</i> | <i>Vagbhat<br/>a</i> | <i>Harita</i> |
|--------------------------|------------------------|------------------|---------------|----------------------|----------------------|---------------|
| <i>aka<br/>gulma</i>     |                        |                  |               |                      |                      |               |
| <i>Granthi<br/>gulma</i> | <i>Nabhi</i>           | Umbilical region | Not mentioned | Not mentioned        | Not mentioned        | Same          |

**Prognosis** –*Sannipatika gulma* is incurable, rest four are curable when treated timely.

**Management-** All the four types of *gulma* can be managed according to the prevalent *doshas*. In emergency conditions if there is no time to diagnose the type of *gulma*, *vata dosha* should be managed first as it is prevalent in all types of *gulma*.

Considering the various clinical features of *gulma* it can be said that the majority of *gulmas* are non-inflammatory and non-malignant intra-abdominal swellings. But some *gulmas* show indications of inflammatory swellings, some benign while some show the characteristics of malignant growths.

### *Vataja gulma*

*Vataja gulma* are mostly irregular, transitory swellings. These are accompanied with different intensities of colicky pain.

Complications like inguinal swelling (*bradhna roga*) gurgling sound in the intestines (*antrakoojana*), fever/elevated temperature in the evenings, splenomegaly (*pleehavridhi*), difficulty in breathing, bodyache (*angamarda*), and headache are commonly in the advanced stages of *gulma*. The above clinical features can be seen in chronic intestinal obstruction, intestinal tuberculosis, pyloric stenosis and in mobile caecum. Intestinal tuberculosis is a chronic condition with common symptoms including transitory nodules of varying sizes occurring due to partial intestinal obstruction, often accompanied with gurgling sounds from the abdomen, poor appetite, and evening fevers, as seen in the advanced stages of *vatika gulma*. Mobile upper abdominal lump, with nausea and breathing difficulty are the features present in the case of pyloric stenosis. In mobile caecum there is also chronic progressive pain in the right flank and in the lower abdomen.

### *Pittaja gulma*

They are painful abdominal lumps characterized with fever, sweating, thirst, burning sensations and burning eructations. These features are suggestive of inflammatory and suppurative changes in the intra-abdominal lump. In due course of time, *pittaja gulma* develops yellow discolouration of nail, eyes and skin, fever, and vertigo as an added complication. These features can be seen in obstructive biliary tract.

### *Kaphaja gulma*

These are fixed, solid abdominal lumps associated with heaviness, vomiting, mild pain and poor appetite. Further, if the exposure to etiological factors is continued, the patient may develop cough, breathing difficulty and *rajayakshma* (tuberculosis) etc. Such swellings can be compared with solid tumors of the abdomen which may or may not be associated with obstructive features of the gastrointestinal tract.

### *Sannipataja gulma*

These swellings are progressively increasing in size, fixed, deep rooted, covered with prominent veins, bulged out, and associated with weakness, nausea, vomiting, fever and thirst. Such features can be seen in malignant abdominal tumors.

### *Raktaja gulma*

These exhibit symptoms similar to those of pregnancy, so it is essential to differentiate them from the point of view of treatment:

| <i>Raktaja Gulma</i>                                  | <i>Garbha</i> (Pregnancy)  |
|---|--|
| Slight movement may be present in later stage         | Some movement is present throughout all trimesters                               |
| Size increases progressively and it remains localized | Progressive change in size   |
| It may be associated with fever, cough, pain etc.     | Presence of other constitutional features of pregnancy, including bodily changes |

The features of Hydatidiform mole and chronic carcinoma closely resemble the features of *raktaja gulma*.

A study was conducted in 50 patients of abdominal swellings, *gulmas* were analysed using clinical tests and radio-imaging techniques such as plain X ray abdomen, Barium studies, USG, intra-operative findings and HPE of the lumps.<sup>313</sup>

- The study showed that *vataja gulma* has chronic obstructive lesions associated with gastrointestinal tract as in the cases of intestinal tuberculosis, pyloric obstruction due to carcinoma of the stomach, etc.
- *Pittaja gulma* includes nonspecific inflammatory lesions such as cholecystitis presenting as mucocele or empyema of gall bladder, appendicitis , etc.

<sup>313</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

- *Kaphaja gulma* includes benign lesions such as ovarian cyst, lipoma etc. Some are of specific chronic inflammatory types such as tubercular mesenteric lymphadenopathy.
- *Tridoshaja gulma* includes most of the malignant lesions of different organs of abdomen, adenocarcinoma of gall bladder, carcinoma ovary etc.
- *Raktaja gulma* features are found in hydatidiform mole and chorio-carcinoma.

## Researches

Thesis work done- Ultrasonographic and other radiological investigative studies on gulma in relation to malignancy (Kumar Satish et al in 1986).

## Reference Books

- Charak Samhita, translation by Acharya P. V. Sharma.
- Charak Samhita, translation by Acharya Bhagvanadasa.
- Sushruta Samhita Uttaratantra 42.
- Ashtanga Hridaya Nidana Sthana 11.
- Ashtanga Samgraha -11(Vidradhi vridhi and gulma nidanam)
- Bhavaprakasha Madhyakanda
- Madhavanidana- gulmanidana

## Related Chapters

- Gulma Chikitsa

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## Prameha Nidana

### Nidana Sthana Chapter 4. Diagnosis and etiopathogenesis of Obstinate Urinary Disorders including diabetes Abstract

This chapter describes the disease prameha (group of obstinate urinary disorders including diabetes) as well as its etiopathogenesis, types, clinical features, prognosis, prodromal symptoms, complications, and a line of treatment. Though it is predominantly a kapha dosha disorder, there are variants involving all three doshas and ten dushya (body tissues and other elements). Excessive and turbid urination are the cardinal signs of all prameha. All those urinary and systemic diseases that cause copious quantities, as well as the abnormal (including turbid) quality of urination, come under the umbrella of prameha. This chapter briefly explains the importance of interaction of exogenous factors, endogenous and tissue response factors in the manifestation of the disease. The concept of genetic susceptibility to disease and effect of chronic disease on genes is also incorporated in this chapter.

**Keywords:** Factors affecting disease pathology, *Prameha*, diabetes, genetic susceptibility, *prabhuta mutrata*, polyuria, *avila mutrata*, turbid urine, *vikarabhighata*, urinary disorders.

## Introduction

The fourth chapter in the Nidana Sthana, dealing with the diagnosis of *prameha*, follows the diagnosis of *gulma* disease associated with the mamsa dhatu. Twenty known types of *prameha*, including diabetes mellitus (*madhumeha*), have been described here. However, there could be innumerable variations of a disease based on the presence or absence of disease (provoking or mitigating) factors in the body. The manifestation of the disease depends upon the interaction between causative factors, dosha, dushya and the defense mechanism of the body. Some of these factors can also help determine if there could be a delayed or an early onset of the disease, the severity of the disease, etc. Various etiological factors of *prameha* are described here that lead to vitiation of kapha dosha, meda dhatu, and mutra. A vitiated kapha affects ten fluid-predominant body tissues, resulting in the production of excessive kleda (moisture/excess discharge of body fluids) that, when intermixed with meda (lipid) and mamsa (muscle protein), further vitiates mutra (urine) and results in *prameha*. A patient afflicted with diabetes mellitus, on an initial visit to the physician, may complain of numbness, tingling, burning sensation in feet, fatigue, dryness of mouth, drowsiness, etc. It is highlighted these signs and symptoms for an early diagnosis and management of *prameha*. Ten types of curable *kaphaja prameha*, six variants of *yaapya* (palliative) and four variants of incurable *vataja prameha*, totaling twenty types of *prameha* have been described here in this text. Prodromal symptoms, complications, treatment procedures (enumerated briefly), and some rules (do's and don'ts) have been included in the course of this chapter.

## Sanskrit Text, Transliteration and English Translation

अथातःप्रमेहनिदानंव्याख्यास्यामः||१||

इतिहस्माहभगवानात्रेयः||२|

athātaḥ pramēhanidānaṁ vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

AthAtaH Prameha nidAnaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAn AtreyaH ||2||

Now we shall expound the chapter “Prameha Nidana” (Diagnosis and etiopathogenesis of Obstinate Urinary Disorders including diabetes). Thus said Lord Atreya. [1-2]

### Types of Prameha

त्रिदोषकोपनिमित्ताविंशतिःप्रमेहाभवन्तिविकाराश्चापरेऽपरिसङ्घेयेयाः।  
तत्रयथात्रिदोषप्रकोपःप्रमेहानभिनिर्वत्यतितथाऽनुव्याख्यास्यामः||३||

tridōṣakōpanimittā viṁśatih pramēhā bhavanti vikārāścāparē'parisaṅkhyēyāḥ| tatra  
yathā tridōṣaprakōpaḥ pramēhānabhinirvartayati tathā'nuvyākhyāsyāmaḥ||3||

TridoShakopanimitTA viMshatiH pramehA bhavanti vikArAshcApare<sub>aparisa</sub>gkhyeyAH |  
tatra yathA tridoShaprakopaH pramehAnabhinirvartayati tathA~anuvyAkhyAsyAmaH||3||

Due to vitiation of three dosha, (any of) twenty types of *prameha* could occur. However, there may be innumerable other variations of the disease. We shall now explain the ways in which vitiation of the three dosha leads to the manifestation of the various types of *prameha*. [3]

### Process of Onset of Disease

इह खलु निदानदोषदूष्यविशेषेभ्यो विकारविघातभावभाव प्रतिविशेषा भवन्ति।  
यदाहयेत्तेवयोनिदानादिविशेषाःपरस्परंनानुबध्नन्त्यथवा[१]  
कालप्रकर्षादबलीयांसोऽथवाऽनुबध्नन्तिनतदाविकाराभिनिर्वृत्तिः, चिराद्वाऽप्यभिनिर्वर्तन्ते,  
तनवोवाभवन्त्ययथोक्तसर्वलिङ्गावा;  
विपर्ययेविपरीताः;इतिसर्वविकारविघातभावभावप्रतिविशेषाभिनिर्वृत्तिहेतुर्भवत्युक्तः||४||

iha khalu nidānadōṣadūṣyaviśeṣebhyo vikāravighātabhāvābhāvaprativiśeṣā bhavanti|  
yadā hyētē trayo nidānādiviśeṣāḥ parasparam nānubadhnantyathavā  
kālaprakarṣādabalīyāṁsō'thavā'nubadhnanti na tadā  
vikārābhinirvṛttih,cirādvā'pyabhinirvartantē, tanavō vā bhavantyayathōktasarvaliṅgā vā;  
viparyayē viparītāḥ;  
itisarvavikāravighātabhāvābhāvaprativiśeṣābhinirvṛttihēturbhavatyuktah||4||

Iha khalu nidAna doShadUShyavisheShebhyo vikAravighAtabhAvAbhAvaprativisheShA bhavantiḥ yadA hyete trayo nidAnAdvisheShAH parasparyāM nAnubadhnantyathavA kAlaprakarShAdaballyAMso<sub>athavA</sub>anubadhnantina tadA vikArAbhinirvRuttiH, cirAdvA~apyabhinirvartante, tanavovA bhavantyayathoktasarvali~ggAvA;viparyaye viparItAH; iti  
sarvavikAravighAtabhAvAbhAvaprativisheShAbhinirvRuttiheturbhavatyuktaH||4||

Here, the specific interaction of etiological factors with *doshas* and *dushyas*, as well as the presence or absence of disease-resisting factors (individual's immunity or ability to resist the disease), influence the outcome regarding the manifestation of a disease (including *prameha*). Temporal factors (e.g. season) also play a role here. For example, if the interaction of etiological factors, *doshas* and *dushyas* are weak and these are antagonistic to each other, and if the influence of temporal factors (time or seasonal influence) are also weak, then either the disease does not manifest, or there is a delay in manifestation of the disease. In such cases, even if there is an onset of the disease, its severity could be low, or all of its signs and symptoms may not manifest. Thus, the presence or absence of specific factors determine the ability or otherwise of the body to resist all types of diseases. [4]

### Etiology of *Kaphaja Prameha*

तत्रेमेत्रयोनिदानादिविशेषाः श्लेष्मनिमित्तानां प्रमेहाणामाश्वभिर्निर्वृत्तिकराभवन्ति; तद्यथा-हायनकयवकचीनकोट्टालकनैषधैत्कटमुकुन्दकमहात्रौहिप्रमोदकसुगन्धकानां नवानामतिवेलमतिप्रमाणेनचोपयोगः, तथासर्पिष्मतां नवहरेणमाषसप्यानां, ग्राम्यानूपौदकानां च मांसानां, शाकतिलपलपिष्टान्नपायसकृशराविलैपीक्षुविकाराणां, क्षीरनवमद्यमन्दकदधिद्रवमधुरतरुणप्रायाणां चोपयोगः, मजाव्यायामवजनं, स्वप्नशयनासनप्रसङ्गः, यश्चकश्चिद्विधिरन्योऽपिश्लेष्ममेदोमूत्रसञ्जननः, ससर्वानिदानविशेषः॥५॥

बहुद्रवः श्लेष्मादोषविशेषः॥६॥

बहवबद्धं मेदोमांसंशरीरजक्लेदः शुक्रं शोणितं वसामज्जालसीका रसश्चौजः सङ्ख्यात इति दूष्यविशेषाः॥७॥

tatrēmē trayō nidānādīviśēṣāḥ ślēṣmanimittānāṁ pramēhānāmāśvabhirnirvṛttikarā bhavanti;  
tadyathā-hāyanakayavakacīnakōddālakanaiṣadhētkaṭamukundakamahāvr̥hipramōdaka sugandhakānāṁ navānāmativēlamatiप्रमाणēna cōpayōgah, tathā sarpiṣmatāṁnavaharēṇumāśasūpyānāṁ, grāmyānūpaudakānāṁ ca māṁsānāṁ, śākatilapalalapiṣṭānnapāyasaक्र्षराविलैपीक्षुविकारानाम्, kṣīranavamadyamandakadadhi dravamadhurataruṇap्रायानाम् cōpayōgah, mrjāvyāyāmavarjanānām, svapnaśayanāsanaprasaṅgah, yaśca kaścidvidhiranyō'piślēṣmamēdōmūtrasañjananah, sa sarvō nidānaviśēṣah॥५॥

bahudravah ślēṣmā dōṣaviśēṣah॥६॥

bahvabaddham [2] mēdō māṁsām śarīrajaklēdah śukram śōṇitam vasā majjā lasīkā rasaśaujaḥ saṅkhyāta iti dūṣyaviśēṣah॥७॥

TatrayonidAnAdivisheShAHshleShmanimitAnAMpramehANAmAshvabhirnrvRuttikarA  
 bhavanti;tadyathAhAyanakayavakacInakoddAlakanaiShadhetkaTamukundakamahAvrIhi  
 pramodakasugandhakAnAMnavAnAmativelamatipramANenacopayogaH,  
 tathAsarpiShmatAM  
 navahareNumAShasUpyAnAM,grAmyAnUpaudakAnAMcamAMsAnAM,  
 shAkatilapalalapiShTAnnapAyasakRusharAvilepIkShuvikArANAM,  
 kShiranavamadyamandakadadhridravamadhurataruNaprAyANAM  
 copayogaH,mRujAvyAyAmavarjanaM,svapnashayanAsanaprasa~ggaH,  
 yashcakashcidvidhiranyo<sub>apishleShmamedomUtrasa</sub>jjananaH,sa sarvonidAnavisheShaH||5||  
 Bahudrava shleShmA doShavisheShaH ||6||  
 Bahvabaddham medo mAMsaM sharlrajakledaH shukraM shoNitaM vasA majjA laslkA  
 rasashcaujaHsa~gkhyAti iti dUSHyavisheShAH ||7||  
 An excessive intake of *kapha*-vitiating food articles or lifestyle activities contributes to severe manifestations of *kaphaja prameha*. The following are some of the specific etiological factors for the *kaphaja* variant of this disease:

- Frequent and excessive intake of:
  - Newly harvested grains like *hayanaka*, *yavaka* (a variety of *Hordeum vulgare* Linn), *chinaka*, *uddalaka*, *naishadha*, *itkata*, *mukundaka*, *mahavrihi*, *promodaka*, and *sugandhaka*;
  - Newly harvested pulses like *harenu* (*Pisum sativum* Linn.) and *masha* (*Phaseolus radiates* Linn.), consumed with ghee;
  - The meat of domesticated, marshy and aquatic animals;
  - Vegetables, *tila* (*Sesamum indicum* Linn.) oil, cakes of *tila*, pastries, *payasa* (milk-based pudding), *krisara* (gruel prepared of *tila*, rice, and black gram), *vilepi* (a type of thick gruel), and sugarcane-based food preparations;
  - Milk, new wine, immature curd (curd which is mostly liquid and sweet);
  - Various dietary regimen that produces excess *kapha*, fat, and urine;
- Lifestyle related activities, including
  - Avoidance of physical exercise; and
  - Excessive sleep, bed rest and sedentary habits;

The *kapha* with excessive fluid component is specific vitiation in *prameha*. Specific *dushyas* of *prameha* include excess abaddha meda (loose fat), mamsa (muscle tissues), vasa (muscle fat), majja (marrow), kleda(body fluids), shukra (semen and reproductive tissues), rakta (blood), lasika (lymph) and rasa (plasma) and ojas (the purest of all dhatus). [5-7]

## Pathogenesis

त्रयाणामेषांनिदानादिविशेषाणांसन्निपातेक्षिप्रश्लेष्माप्रकोपमापदयते, प्रागतिभृयस्त्वात्;  
सप्रकुपितःक्षिप्रमेवशरीरेविसृष्टिंलभते, शरीरशैथिल्यात्; सविसर्पेऽशरीरेमेदसैवोदितोमिश्रीभावंगच्छति,  
मेदसैश्चैवबहवबद्धत्वान्मेदसश्चगणैःसमानगणभयिष्ठत्वात्; स मेदसामिश्रीभवन्दूषयत्येनत्,  
विकृतत्वात्; सविकृतोदृष्टेनमेदसोपहितः शरीरक्लेदमांसाभ्यांसंसर्गगच्छति,  
क्लेदमांसयोरत्प्रमाणाभिवृद्धत्वात्;  
समांसेमांसप्रदोषात्पूतिमांसपिडकाःशराविकाकच्छपिकाद् याःसञ्जनयति,

अप्रकृतिभूतत्वात्, शरीरक्लेदंपुर्नदूषयन्मत्त्वेनपरिणमयति,  
मूत्रवहानाचस्तोतसावड़क्षणबस्तिप्रभवाणी॥१॥मेदःक्लेदोपहितानिगुरुणिमुखान्यासाद्यप्रतिरूप्यते;ततःप्रमे  
हास्तेषांस्थैर्यमसाध्यतांवाजनयति, प्रकृतिविकृतिभूतत्वात्॥८॥

trayāṇāṁśāṁ nidānādīviśēśāṁ sannipātē kṣipram ślēśmā prakōpamāpadyatē,  
prāgatibhūyastvāt; sa prakupitaḥ kṣipramēva śarīrē visṛptim labhatē, śarīraśaithilyāt; sa  
visarpañ śarīrē mēdasaivāditō miśrībhāvam gacchatī, mēdasaścaiva  
bahvabaddhatvānmēdasaśca guṇaiḥ samānaguṇabhūyisthatvāt; sa  
mēdasāmiśrībhavan dūshayatyēnat, vikṛtavtāt; sa vikṛtō duṣṭēna mēdasōpahitaḥ  
śarīraklēdamāṁsābhȳāṁ samśargam gacchatī,  
kḷēdamāṁsāsayōratipramāṇābhivṛddhatvāt; samāṁsē māṁsapradōśāt  
pūtimāṁsapiḍakāḥ śarāvikākacchapikādyāḥ sañjanayati, aprakṛtibhūtavtāt;  
śarīraklēdāṁ punardūṣayan mūtratvēna parinamayati, mūtravahānāṁ ca srōtasāṁ  
vaṅkṣaṇabastiprabhavāṇāṁ mēdaḥkḷēdōpahitāni gurūṇi mukhānyāsādya pratirudhyatē;  
tataḥ pramēhāṁstēśāṁsthairyamasādhyatāṁ vā janayati, prakṛtivikṛtibhūtavtāt||८||

TrayAnAmesaM nidAnAdivisheShANAM sannipAte kShipraM shleShmA  
prakopamApadyate, prAgatibhUyastvAt; sa prakupitaH kShiprameva sharIre visRuptiM  
labhate, sharIrashaithilyAt;sa visarpa~j sharIre medasaivAdito mishrlbhAvAM gacchatī,  
medasashcaiva bahvabaddhatvAnmedasashca guNaiH  
samAnaguNabhUyishThatvAt;sa medasA mishrlbhavan dUShayatyenat, vikRutavtAt;  
sa vikRuto duShTena medasopahitaH sharIrakledamAMsAbhyAM saMsargaM gacchatī,  
kledamAMsayoratipramANAbhivRuddhatvAt; sa mAmsE Ma MsapradoShAt pUtimA  
MsapiDakAH sharAvikAkacchapikAdyAH sa~jjanayati, aprakRutibhUtavtAt;  
sharIrakledaM punardUShayanmUtratvena pariNamayati,mUtravahAnAM ca srotasAM  
va~gkShaNabastiprabhavANAM medaHkledopahitAni gurUNi mukhAnyAsAdya  
pratirudhyate; tataH pramehAMsteShAM sthairyamasAdhyatAM vA janayati,  
prakRutivikRutibhUtavtAt ||८||

Etiological factors (especially *kapha*-dominant ones), *doshas*, and *dushyas* mentioned in the preceding verses can trigger the manifestation of *kaphaja prameha*. The aggravated *kapha* spreads all over the body quickly because of flaccid muscles and fatty tissues. The *kapha* blends quickly with the *medas* (fat) – primarily because the fats typically are excessive in quantity and viscous and soft in “favorable” body conditions but also because *kapha* and *medas* share identical qualities. As *kapha* itself is vitiated, it vitiates *medas* in the process. The vitiated *kapha* - *meda* then mixes with *mamsa* (muscle tissues) and *kleda* (moisture/body fluid), in as much as these two are supposed

to have already exceeded their quantity. Vitiation of the muscle tissues provides a congenial atmosphere for the manifestation of putrified carbuncles (*pidika*) like *sharavika* and *kacchapika* in the muscle. The liquid *dhatus* in the body get further vitiated and transformed into *mutra* (urine). *Vrikka* (kidney) and *basti* (urinary bladder) are at the two ends of the channels carrying urine; the openings of these channels get affected by [*meda* (fat) and *kleda*. The vitiated *kapha* obstructs the openings of these channels. This results in the manifestation of *prameha* which becomes chronic or incurable due to the affection of all qualities of *kapha* and simultaneous vitiation of homogenous and heterogenous *dhatus*. [8]

### Signs, Types, and Prognosis of *Kaphaja Prameha*

शरीरक्लेदस्तु श्लेष्ममेदोमिश्रः प्रविशन्मूत्राशयं मूत्रत्वमापद्यमानः श्लैष्मिकैरभिर्देशभिर्गुणौ रूपसृज्यते वैषम्ययक्तैः; तदयथा-  
श्वेतशीतमूर्तपिच्छिलाच्छस्निग्धगुरुमधुरसान्द्रप्रसादमन्दैः; तत्रयेनगुणेनैकेनानेकेनवाभूयस्तरमुपसृज्यते  
तत्समाख्येगौणनामविशेषं प्राप्नोति॥९॥

तेतु खल्विमेदशप्रमेहानामविशेषेण भवन्ति; तदयथा- उदकमेहश्च, इक्षुवालिकारसमेहश्च, सान्द्रमेहश्च,  
सान्द्रप्रसादमेहश्च, शक्लमेहश्च, शुक्रमेहश्च, शौतमेहश्च, सिकतामेहश्च, शनैर्मेहश्च,  
आलालमेहश्चेति॥१०॥

तेदशप्रमेहाः साध्याः; समानगुणमेदः स्थानकत्वात्, कफस्यप्राधान्यात्, समक्रियत्वाच्च॥११॥

śarīraklēdastu ślēṣmamēdōmiśraḥ praviśan mūtrāśayāṁ mūtratvamāpadyamānaḥ  
ślaiśmikairēbhirdaśabhirguṇairupasṛjyatē vaiśamyayuktaiḥ;  
tadyathā-śvētaśītamūrtapicchilācchasnigdthagurumadhurasāndraprasādamandaiḥ, tatra  
yēna guṇēnaikēnānēkēna vā bhūyastaramupasṛjyatē tatsamākhyāṁ  
gauṇāmnāmaviśēśāṁ prāpnōti॥९॥

tē tu khalvime daśa pramēhā nāmaviśēśēṇa bhavanti; tadyathā- udakamēhaśca,  
ikṣuvālikārasamēhaśca, sāndramēhaśca, sāndraprasādamēhaśca,  
śuklamēhaśca, śukramēhaśca, śītamēhaśca, sikatāmēhaśca, śanairmēhaśca,  
ālālamēhaścēti॥१०॥

tē daśa pramēhāḥ sādhyāḥ; samānaguṇamēdaḥsthanakatvāt, kaphasya prādhānyāt,  
samakriyatvācca॥११॥

Sarirakledastu shleShmamedomishraH pravishan mUtrAshayaM  
mUtratvamApadyamAnaH shlaiShmikairebhirdashabhirguNairupasRujyate  
vaiShamyayuktaiH; tadyathA shvetashItam  
UrtapicchilAcchasnigdthagurumadhurasAndraprasAdamandaiH, tatra yena  
guNenaikenAnekenavA bhUyastaramupasRujyate tatsamAkhyaM gauNaM  
nAmavisheShaM prApnoti॥९॥

te tu khalvime dasha pramehA nAmavisheSheNa bhavanti; tadyathA- udakamehashca,  
ikShuvAlikArasamehashca, sAndramehashca, sAndraprasAdamehashca,  
shuklamehashca, shukrumehashca, shltamehashca, sikatAmehashca,  
shanairmehashca, AlAlamehashceti॥१०॥

te dasha pramehAH sAdhyAH; samAnaguNamedaHsthAnakatvAt, kaphasya prAdhAnyAt, samakriyatvAcca||11||

Fluids of the body (*kleda*) along with *kapha* and *medas* (fat) enter the *vrikka* (kidney) and *basti* (urinary bladder), transforming into *mutra* (urine). During this process, they acquire the morbid qualities of *kapha*, viz, white, cold, particulate, slimy, transparent, unctuous, heavy, sweet, dense, clear and slow. The morbid conditions are named after these qualities, one or many of which may dominate the process of pathogenesis.

The ten *kaphaja prameha* variants are as follows:

1. *Udakameha*
2. *Ikshuvalikarasameha*
3. *Sandrameha*
4. *Sandraprasadameha*
5. *Shuklameha*
6. *Shukrameha*
7. *Sheetameha*
8. *Sikatameha*
9. *Shanirameha*
10. *Alalameha*

These are curable because:

1. The *medas* (fat) and *kapha* have similar properties and loci,
2. The *kapha* is dominant, and
3. Both *medas* and *kapha* are amenable to the same treatment. [9-11]

### Specific Features of Types of *Kaphaja Prameha*

तत्रश्लोकाः श्लेष्मप्रमेहविशेषविज्ञानार्थभवन्ति-॥१२॥

अच्छंबहुसितंशीतंनिर्गन्धमुदकोपमम् श्लेष्मकोपान्नरोमूत्रमुदमेहीप्रमेहति॥१३॥

अत्यर्थमधुरंशीतमीषतिपिच्छिलमाविलम् काण्डेक्षुरसमङ्काशंश्लेष्मकोपात्प्रमेहति॥१४॥

यस्यपर्युषितंमूत्रसान्द्रीभवतिभाजने पुरुषंकफकोपेनतमाहुःसान्द्रमेहिनम्॥१५॥

यस्यसंहन्यतेमूत्रंकिञ्चित्किञ्चित्प्रसीदति सान्द्रप्रसादमेहीतिमाहुःश्लेष्मकोपतः॥१६॥

शुक्लंपिष्टनिभंमूत्रमभीक्ष्णयःप्रमेहति पुरुषंकफकोपेनतमाहुःशुक्लमेहिनम्॥१७॥

शुक्राभंशुक्रमिश्रंवामुहुर्मेहतियोनरः शुक्रमेहिनमाहुस्तंपुरुषंश्लेष्मकोपतः॥१८॥

अत्यर्थमधुरंशीतंमूत्रंमेहतियोभृशम् शीतमेहिनमाहुस्तंपुरुषंश्लेष्मकोपतः॥१९॥

मूर्तान्मूत्रगतान्दोषानणून्मेहतियोनरः सिकतामेहिनंविद्यात्तनरंश्लेष्मकोपतः॥२०॥

मन्दंमन्दमवेगंतुकृच्छ्रंयोमूत्रयेच्छनैः शनैर्मेहिनमाहुस्तंपुरुषंश्लेष्मकोपतः॥२१॥

तन्तुबद्धमिवालालंपिच्छिलंयःप्रमेहति| आलालमेहिनंविद्यात्तंनरंश्लेष्मकोपतः||२२||

इत्येतेदशप्रमेहा॒ःश्लेष्मप्रकोपनिमित्ताव्याख्याताभवन्ति||२३||

tatra ślōkāḥ ślēśmapramēhaviśēsavijñānārthā bhavanti-||12||

acchāṁ bahu sitāṁ śītāṁ nirgandhamudakōpamam| ślēśmakōpānnarō  
mūtramudamēhī pramēhati||13||

atyarthamadhurāṁ śītāṁśatpicchilamāvilam| kāṇḍēkṣurasamaṅkāśāṁ ślēśmakōpāt  
pramēhati||14||

yasya paryuṣitāṁ mūtramā sāndrībhavati bhājanē| puruṣāṁ kaphakōpēna tamāhuḥ  
sāndramēhinam||15||

yasya saṁhanyatē mūtramā kiñcit kiñcit prasīdati| sāndraprasādamēhīti tamāhuḥ  
ślēśmakōpataḥ||16||

śuklamā piṣṭanibhāṁ mūtramabhīkṣṇāṁ yaḥ pramēhati| puruṣāṁ kaphakōpēna tamāhuḥ  
śuklamēhinam||17||

śukrābhaṁ śukramiśraṁ vā muhurmēhati yō narah| śukramēhinamāhustāṁ puruṣāṁ  
ślēśmakōpataḥ||18||

atyarthamadhurāṁ śītāṁ mūtramā mēhati yō bhṛśam| śītāṁśatpicchilamāvilam  
ślēśmakōpataḥ||19||

mūrtānmūtragatāṁ dōśānañūnmēhati yō narah| sikatāmēhinamāhustāṁ puruṣāṁ  
ślēśmakōpataḥ||20||

mandāṁ mandamavēgam tu kṛcchramā yō mūtrayēcchanaiḥ| śanairmēhinamāhustāṁ puruṣāṁ  
ślēśmakōpataḥ||21||

tantubaddhamivālālaṁ picchilāṁ yaḥ pramēhati| ālālamēhinamāhustāṁ puruṣāṁ  
ślēśmakōpataḥ||22||

ityētē daśa pramēhāḥ ślēśmaprakōpanimittā vyākhyātā bhavanti||23||

tatra shlokAH shleShmapramehavisheShavij~jAnArthA bhavanti-||12||

acchaM bahu sitaM shitaM nirgandhamudakopamam| shleShmakopAnnaro  
mUtrumudamehl pramehati||13||

atyarthamadhuraM shltamIShatpicchilamAvilam| kANDekShurasama~gkAshaM  
shleShmakopAt pramehati||14||

yasya paryuShitaM mUtraM sAndrlbhavati bhAjane| puruShaM kaphakopena tamAhuH  
sAndramehinam||15||

yasya saMhanyate mUtraM ki~jcit ki~jcit prasIdati| sAndraprasAdamehlti tamAhuH  
shleShmakopataH||16||

shuklaM piShTanibhaM mUtramabhIkShNaM yaH pramehati| puruShaM kaphakopena tamAhuH shuklamehinam||17||

shukrAbhaM shukramishraM vA muhurmehati yo naraH| shukrakehinamAhustaM puruShaM shleShmakopataH||18||

atyarthamadhuraM shitaM mUtraM mehati yo bhRusham| shitamehinamAhustaM puruShaM shleShmakopataH||19||

mUrtAnmUtragatAn doShAnaNUnmehati yo naraH| sikatAmehinaM vidyAttaM naraM shleShmakopataH||20||

mandaM mandamavegaM tu kRucchraM yo mUtrayecchanaiH| shanairmehinamAhustaM puruShaM shleShmakopataH||21||

tantubaddhamivAlAlaM picchilaM yaH pramehati| AlAlamehinaM vidyAttaM naraM shleShmakopataH||22||

ityete dasha pramehAH shleShmaprakopanmittA vyAkhyAtA bhavanti||23||

The specific features of different types of *kaphaja prameha* are as follows (in verses):

1. In *udakameha* the individual passes large quantities of water-like urine which is transparent, white, cold and without any smell.
2. In *iksuvalikarasameha*, the patient passes urine resembling sugarcane juice which is exceedingly sweet, cold, slightly saline, and turbid.
3. In *sandrameha*, the viscosity of urine of the individual increases when kept overnight.
4. In *sandraprasadameha*, the urine of the patient become partly viscous and partly clear when kept overnight.
5. In *suklameha*, the patient passes urine having opaque, white color like that of pasted flour.
6. In *shukrakeha* patient passes semen-like urine or urine mixed with semen.
7. In *sheetameha*, the patient gets frequent micturition which is exceedingly sweet and cold.
8. In *siktameha*, vitiated *doshas* pass with urine in the form of small gravels.
9. In *shanirameha*, the patient passes small quantity of urine with difficulty and very slowly.
10. In *alalameha*, the patient passes urine which is phlegm-like and slimy as if full of threads.

Thus, the ten types of *prameha* due to vitiation of *kapha* have been explained. [12-23]

## Etiology and Types of *Pittaja Prameha*

उष्णाम्ललवणक्षारकट्काजीर्णभोजनोपसेविनस्तथाऽतितीक्ष्णातपाग्निसन्तापश्रमक्रोधविषमाहारोपसेवि  
नश्चतथाविधशरीरस्यैवक्षिप्रंपितंप्रकोपमापद्यते,  
ततुप्रकुपितंतयैवानुपूर्व्याप्रमेहानिमान्षट्क्षिप्रतरमभिनिर्वर्तयति॥२४॥

तेषामपितुखलुपित्तगुणविशेषेणैवनामविशेषाभवन्ति; तद्यथा- क्षारमेहश्च, कालमेहश्च, नीलमेहश्च,  
लोहितमेहश्च, माञ्जिष्ठमेहश्च, हारिद्रमेहश्चेति॥२५॥

तेषडभिरेवक्षाराम्ललवणकट्कविस्रोष्णैःपित्तगुणैःपूर्ववद्युक्ताभवन्ति॥२६॥

uṣṇāmlalavaṇakṣārakaṭukājīrṇabhojanōpasēvinastathā'titikṣṇātapaṅnisantāpaśrama  
krōdhaviśamāhārōpasēvinaśca tathāvidhaśarīrasyaiva kṣipram  
pittarāmprakopamāpadyatē, tattu prakupitām tayaivānupūrvyā pramēhānimān ṣaṭ  
kṣiprataramabhiniṛvartayati॥२४॥

tēśāmapi tu khalu pittaguṇaviśēśēṇaiva nāmaviśēśā bhavanti; tadyathā- kṣāramēhaśca,  
kālamēhaśca, nīlamēhaśca, lōhitamēhaśca, māñjīṣṭhamēhaśca, hāridramēhaścēti॥२५॥

tē ṣadbhirēva kṣārāmlalavaṇakaṭukavisrōṣṇaiḥ pittaguṇaiḥ pūrvavadyuktā bhavanti॥२६॥

uShNAmlalavaNakShArakaTukAjlNabhojanopasevinastathA~atitIkShNAtapAgnisantAp  
ashrama krodhaviShamAhAropasevinashca tathAvidhasharIrasyaiva kShipraM pittaM  
prakopamApadyate, tattu prakupitaM tayaivAnupUrvyA pramehAnimAn ShaT  
kShiprataramabhiniṛvartayati॥२४॥

teShAmapi tu khalu pittaguNavisheSheNaiva nAmavisheShA bhavanti; tadyathA-  
kShAramehashca, kAlamehashca, nllamehashca, lohitamehashca,  
mA~jjIShThamehashca, hAridramehashceti॥२५॥

te ShaDbhireva kShArAmlalavaNakaTukavisroShNaiH pittaguNaiH pUrvavadyukta  
bhavanti॥२६॥

*Pitta* gets immediately aggravated in an individual whose body is pre-conditioned by  
abovementioned (verse 5) factors and exposed to factors such as the following:

1. Intake of hot, sour, salty, alkaline and pungent foods;
2. Intake of food before the digestion of the previous meal;
3. Exposure to excessively hot sun, heat of the fire, physical exertion and anger;  
and
4. Intake of mutually contradictory food articles.

The aggravated *pitta* following the same pathogenic process (as mentioned for *kaphaja prameha*) and manifests into one of six types of *pittaja prameha*. The process of manifestation is quicker than that of *kaphaja meha*. According to the characteristics of *pitta*, they are named as follows:

1. *Kharameha*
2. *Kalameha*

3. *Nilameha*
4. *Raktameha*
5. *Manjisthameha*
6. *Haridrameha*

As described in earlier chapters, these variants also manifest due to permutations and combinations of the six qualities of *pitta*, i.e., alkaline, sour, saline, pungent, hot and having smell like that of raw fish. [24-26]

### **Specific Features of Types of *Pittaja Prameha***

सर्वएवतेयाप्याः संसृष्टदोषमेदः स्थानत्वाद् विरुद्धोपक्रमत्वाच्चेति ॥२७॥

तत्रश्लोकाः पित्तप्रमेहविशेषविजानार्थाभवन्ति- ॥२८॥

गन्धवर्णरसस्पर्शर्यथाक्षारस्तथाविधम् । पित्तकोपान्नरोमूत्रं क्षारमेहीप्रमेहति ॥२९॥

मसीवर्णमजसंयोमूत्रमुष्णं प्रमेहति । पित्तस्यपरिकोपेण तं विद्यात्कालमेहिनम् ॥३०॥

चाषपक्षनिभं मूत्रमम्लं मेहतियोनरः । पित्तस्यपरिकोपेण तं विद्यान्नीलमेहिनम् ॥३१॥

विसंलवणमुष्णं चरकं मेहतियोनरः । पित्तस्यपरिकोपेण तं विद्याद्रकतमेहिनम् ॥३२॥

मञ्जिष्ठोदकसङ्काशं भृशं विसंप्रमेहति । पित्तस्यपरिकोपातं विद्यान्माञ्जिष्ठमेहिनम् ॥३३॥

हरिद्रोदकसङ्कटुकं यः प्रमेहति । पित्तस्यपरिकोपातं विद्यादधारिद्रमेहिनम् ॥३४॥

इत्येतेष्टप्रमेहाः पित्तप्रकोपनिमित्ताव्याख्याताभवन्ति ॥३५॥

sarva ēva tē yāpyāḥ saṁsṛṣṭadōśamēdaḥ sthānatvād viruddhōpakramatvāccēti ॥२७॥

tatra ślōkāḥ pittapramēhaviśēśavijñānārthā bhavanti- ॥२८॥

gandhavarṇarasasparśairyathā kṣārastathāvidham| pittakōpānnarō mūtram kṣāramēhī pramēhati ॥२९॥

masīvarṇamajasarām yō mūtramuṣṇām pramēhati| pittasya parikōpēṇa tam̄ vidyāt kālamēhinam ॥३०॥

cāṣapakṣanibham mūtramamlam mēhati yō narah| pittasya parikōpēṇa tam̄ vidyānnīlamēhinam ॥३१॥

visram lavaṇamuṣṇām ca raktam mēhati yō narah| pittasya parikōpēṇa tam̄ vidyādraktamēhinam ॥३२॥

mañjīṣṭhōdakasaṅkāśām bhr̄śam visram pramēhati| pittasya parikōpāttam̄ vidyānmāñjīṣṭhamēhinam ॥३३॥

haridrōdakasaṅkāśām kaṭukam yah pramēhati| pittasya parikōpāttam̄ vidyāddhāridramēhinam ॥३४॥

ityētē ṣat pramēhāḥ pittaprakōpanimittā vyākhyātā bhavanti||35||

sarva eva te yApyAH

saMsRuShTadoShamedaHsthAnatvAdviruddhopakramatvAcceti||27||

tatra shlokAH pittapramehavisheShavij~jAnArthA bhavanti-||28||

gandhavarNarasasparshairyathA kShArastathAvidham| pittakopAnnaro mUtraM  
kShAramehl pramehati||29||

maslvarNamajasraM yo mUtramuShNaM pramehati| pittasya parikopeNa taM vidyAt  
kAlamehinam||30||

cAShapakShanibhaM mUtramamlaM mehati yo naraH| pittasya parikopeNa taM  
vidyAnnllamehinam||31||

visraM lavaNamuShNaM ca raktam mehati yo naraH| pittasya parikopeNa taM  
vidyAdraktamehinam||32||

ma<sub>jjishThodakasa</sub>gkAshaM bhRushaM visraM pramehati| pittasya parikopAttaM  
vidyAnmA~jjishThamehinam||33||

haridrodakasa~gkAshaM kaTukaM yaH pramehati| pittasya parikopAttaM  
vidyAddhAridramehinam||34||

ityete ShaT pramehAH pittaprakopanmittA vyAkhyAtA bhavanti||35||

All these types of *prameha* are palliable (but not fully curable) because the loci of vitiated *medas* in the pathogenesis of this disease are closer to those of the affected *doshas* and the treatment of *pitta* and *medas* is in mutual contradiction. The specific features of different types of *prameha* caused by *pitta* are given below:

1. In *ksharameha* the patient passes urine having the smell, color, taste and touch similar to those of alkalies.
2. In *kalameha* the patient passes large quantities of black or dark urine.
3. In *nilameha* the patient passes urine having sour taste and color like that of the feather of the blue jay.
4. In *raktameha* the patient passes urine having red color, saline taste and smell like that of raw fish.
5. In *manjisthameha* the patient passes urine frequently, and the urine smells like raw flesh and looks like the juice of *manjistha* (*Rubia cordifolia Linn.*).
6. In *haridrameha* the patient passes urine having pungent taste and color like that of the juice of *haridra* (*Curcuma longa Linn.*).

Thus, six varieties of *prameha* due to vitiation of *pitta* are explained. [27-35]

## *Etiopathogenesis of Vataja Prameha*

कषायकटुतिक्तरुक्षलघशीतव्यवायव्यायामवमनविरेचनास्थापन-शिरोविरेचनातियोगसन्धारणानशनाभिघातातपौद्वेगशोकशोणितातिषेक- जागरणविषमशरीरन्यासानुपसेवमानस्यतथाविधशरीरस्यैवक्षिप्रवातः प्रकोपमापद्यते॥३६॥

सप्रकुपितस्तथाविधेशरीरेविसर्पन्यदावसामादायमत्रवहानिस्रोतांसिप्रतिपद्यतेतदावसामेहमभिनिर्वर्तयति; यदपुनर्मज्जानमूत्रबस्तावाकर्षतितदामज्जमेहमभिनिर्वर्तयति;

यदातुलसीकांमत्राशयेऽभिवहन्मूत्रमनुबन्धंच्योतयितिलसीकातिबहृत्वादविक्षेपणाच्चवायोःखल्वस्यातिमूत्रप्रवृत्तिसङ्गं [१]करोति, तदासमतेऽवगजःक्षरत्यजस्मूत्रमवेगं, तंहस्तमेहिनमाचक्षते;

आँजःपुनर्मधुरस्वभाव,

तद्यदारौक्ष्याद्वायुःकषायत्वेनाभिसंसृज्यमूत्राशयेऽभिवहतितदामधुमेहंकरोति॥३७॥

kaśāyakaṭutktarūkṣalaghūśītavyavāyavyāyāmavamanavirēcanāsthāpana-śirōvirēcanātiyogaśandhāraṇānaśanābhīghātātapōdvēgaśōkaśōṇitātiśēka-jāgaranāviśamaśarīranyāśānupasēvamānasya tathāvidhaśarīrasyaiva kṣipram vātaḥ prakōpamāpadyatē॥३६॥

sa prakupitastathāvidhē śarīrē visarpan yadā vasāmādāya mūtravahāni srōtāṁsi  
pratipadyatē tadā vasāmēhamabhinirvartayati; yadā  
punarmajjānārmūtrabastāvākarşati tadā majjamēhamabhinirvartayati; yadā tu lasīkāṁ  
mūtrāśayē'bhibahanmūtramanubandhaṁ cyotayati lasīkātibahutvādvikṣēpañācca  
vāyōḥkhalyasyātīmūtrapravṛttisaṅgam [11] karōti, tadā sa matta iva gajah  
kṣaratyajasraṁ mūtramavēgaṁ, tam hastimēhinamācakṣatē; ojaḥ  
punarmadhurasvabhāvaṁ, tadyadā raukṣyādvāyuḥ kaśāyatvēnābhisaṁsṛjya  
mūtrāśayē'bhibhati tadā madhumēhaṁ karōti॥३७॥

KaShAyakaTutktarUkShalaghushItavyavAyavyAyAmavamanavirecan AsthApana  
shirovirecanAtiyogasandhAraNAAnashanAbhighAtAtapodvegashekoNitAtiSheka-  
jAgaraNaviShamasharIranyAsAnupasevamAnasya tathAvidhasharIrasyaiva kShipraM  
vAtaH prakopamApadyate॥३६॥

sa prakupitastathAvidhe sharIre visarpan yadA vasAmAdAya mUtravahAni srotAMsi  
pratipadyate tadA vasAmehamabhinirvartayati; yadA punarmajjAnaM  
mUtrabastAvAkashati tadA majjamehamabhinirvartayati; yadA tu lasIkAM  
mUtrAshaye~abhibahanmUtramanubandhaM cyotayati  
lasIkAtibahutvAdvikShepAÑAcca vAyoH khalyasyAtimUtrapravRuttisa~ggaM karoti,  
tadA sa matta iva gajaH kSharatyajasraM mUtramatvegaM, taM  
hastimehinamAcakShate; ojaH punarmadhurasvabhAvaM, tad yadA raukShyAdvAyuH  
kaShAyatvenAbhisamsRujya mUtrAshaye~abhibhati tadA madhumehaM karoti॥३७॥

*Vata* gets immediately aggravated in an individual whose body is pre-conditioned by above mentioned (verse 5) factors and exposed to the following factors:

1. Excessive intake of astringent, pungent, bitter, rough, light and cold things;
2. Excessive indulgence in sex and physical exercise.
3. Excessive administration of emesis, purgations, asthaphana type of enema and *shirovirechana* (elimination of *doshas* from the head), and

- Suppression of the manifested urges, fasting, trauma due to assault, exposure to sun, anxiety, grief, excessive bloodletting, staying awake at night, and irregular posture of the body.

The aggravated *vata* spreads throughout the body, and along with *vasa* (muscle fat), enters the ureter leading to the manifestation of *vasameha*. When it carries marrow to the urinary bladder, it results in *majjameha*.

Due to the large quantity of *lasika* (lymphs) in the body and also due to the property of *vata* to dissipate things, *lasika* entering the urinary bladder produces large quantity of urine, causing a continuous urge for micturition and, thus, passing copious amounts of urine continuously (even) without any pressure, like an elephant (*hasti*) gone amuck. Thus, this is also known as *hastimeha*. *Ojas* is, by nature, of sweet taste. However, its roughness causes *vata* to convert it into an astringent tasting element. This *vata*-afflicted *ojas*, when gets into the urinary bladder, causes *madhumeha*. [36-37]

### Incurability of *Vataja Prameha* and its Other Characteristics

इमांश्चतुरः प्रमेहान् वातजानसाध्यानाचक्षते भिषजः, महात्ययिकत्वाद् विरुद्धोपक्रमत्वाच्चेति॥३८॥

तेषामपि पूर्वदगुणविशेषेण नामविशेषा भवन्ति; तद्यथा- वसामेहश्च, मज्जमेहश्च, हस्तिमेहश्च,  
मधुमेहश्चेति॥३९॥

तत्र श्लोका वातप्रमेहविशेषविजानार्था भवन्ति-॥४०॥

वसामिश्रं वसाभं वा मुहुर्मेहति यो नरः। वसामेहिनमाहुस्तमसाध्यं वातकोपतः॥४१॥

मज्जानं सह मूत्रेण मुहुर्मेहति यो नरः। मज्जमेहिनमाहुस्तमसाध्यं वातकोपतः॥४२॥

हस्ती मत इवाजसं मूत्रं क्षरति यो भृशम्। हस्तिमेहिनमाहुस्तमसाध्यं वातकोपतः॥४३॥

कषायमधुरं पाण्डु रुक्षं मेहति यो नरः। वातकोपादसाध्यं तं प्रतीयान्मधुमेहिनम्॥४४॥

इत्येते चत्वारः प्रमेहा वातप्रकोपनिमित्ता व्याख्याता भवन्ति॥४५॥

एवं त्रिदोषप्रकोपनिमित्ता विंशतिः प्रमेहा व्याख्याता भवन्ति॥४६॥

imāṁścaturaḥ pramēhān vātajānasādhyānācakṣatē bhiṣajah,  
mahātyayikatvādviruddhōpakramatvāccēti॥38॥

tēśāmapi pūrvavadguṇaviśeṣēṇa nāmaviśeṣā bhavanti; tadyathā- vasāmēhaśca,  
majjamēhaśca, hastimēhaśca, madhumēhaścēti॥39॥

tatra ślōkā vātāpramēhaviśeṣavijñānārthā bhavanti-॥40॥

vasāmiśraṁ vasābhaṁ vā muhurmēhati yō narah। vasāmēhinamāhustamasādhyam  
vātakōpataḥ॥41॥

majjānaṁ saha mūtrēṇa muhurmēhati yō narah। majjamēhinamāhustamasādhyam  
vātakōpataḥ॥42॥

hastī matta ivājasraṁ mūtrāṁ kṣarati yō bhṛśam| hastimēhinamāhustamasādhyāṁ vātakōpataḥ||43||

kaśāyamadhurāṁ pāṇḍu rūkṣāṁ mēhati yō narah| vātakōpādasādhyāṁ tam  
pratīyānmadhumēhinam||44||

ityētē catvārah pramēhā vātaprakōpanimittā vyākhyātā bhavanti||45||

ēvam̄ tridōṣaprakōpanimittā virśatiḥ pramēhā vyākhyātā bhavanti||46||

imAMshcaturaH pramehAn vAtajAnasAdhyAnAcakShate bhiShajaH,  
mahAtayikatvAdviruddhopakramatvAcceti||38||

teShAmapi pUrvavadguNavisheSheNa nAmavisheShA bhavanti; tadyathA-  
vasAmehashca, majjamehashca, hastimehashca, madhumehashceti||39||

tatra shlokA vAtapramehavisheShavij~jAnArthA bhavanti-||40||

vasAmishraM vasAbhaM vA muhurmehati yo naraH| vasAmehinamAhustamasAdhyaM  
vAtakopataH||41||

majjAnaM saha mUtreNa muhurmehati yo naraH| majjamehinamAhustamasAdhyaM  
vAtakopataH||42||

hasti matta ivAjasraM mUtraM kSharati yo bhRusham|  
hastimehinamAhustamasAdhyaM vAtakopataH||43||

kaShAyamadhuraM pANDu rUkShaM mehati yo naraH| vAtakopAdasAdhyaM taM  
pratlyAnmadhumehinam||44||

ityete catvAraH pramehA vAtaprakopanimittA vyAkhyAtA bhavanti||45||

evaM tridoShaprakopanimittA viMshatiH pramehA vyAkhyAtA bhavanti||46||

These four types of *prameha* (*vasameha*, *majjameha*, *hastimeha*, and *madhumeha*) due to the vitiation of *vata* are known to be serious conditions and are incurable because of the contradictions involved in their treatment.

As in the case of other *pramehas*, these variants are also named after the attribute involved in the pathogenesis. Their specific features are as follows:

1. In *vasameha*, the patient frequently passes urine mixed with *vasa* or having the appearance of *vasa*. It is incurable and caused by the aggravation of *vata*.
2. In *majjameha*, the patient frequently passes urine mixed with *majja*. It is incurable and caused by the aggravation of *vata*.
3. In *hastimeha*, the patient passes large quantities of urine frequently “like an elephant gone amuck”, as mentioned earlier. It is incurable and caused by the aggravation of *vata*.
4. In *madhumeha*, the patient passes urine sweet and astringent in taste, pale in color and ununctuous. It is incurable and caused by the aggravation of *vata*.

Thus explained are the four variants of *vataja prameha* and twenty types of *prameha* (due to vitiation of the three *doshas*).[38-46]

### General Prodromal Features of *Prameha*

त्रयस्तखलदोषाःप्रकपिता:प्रमेहानभिन्वर्तयिष्यन्तइमानि पूर्वरूपाणिदर्शयन्ति; तद्यथा-  
जटिलौभावैकेशोषु, माधुर्यमास्यस्य, करपादयोःसुप्ततादाहौ, मुखतालुकण्ठशोषं, पिपासाम्, आलस्यं,  
मलंकाये, कायच्छिद्रेषैषुपदेहं, परिदाहसुप्ततांचाङ्गेष, षट्पदपिपीलिकाभिश्चशरीरमूत्राभिसरणं,  
मूत्रेचमूत्रदोषान्, विसंशरीरगन्धं, निद्रां, तन्द्रांचसर्वकालमिति॥४७॥

trayastu khalu dōṣāḥ prakupitāḥ pramēhānabhinirvartayiṣyanta imāni pūrvarūpāṇi  
darśayanti; tadyathā- jaṭilībhāvarāṁ kēśeṣu, mādhuryamāsyasya,  
karapādayōḥsuptatādāhau, mukhatālukanṭhaśōṣāṁ, pipāsām, ālasyām, malaṁ kāyē,  
kāyacchidrēṣūpadēhaṁ, paridāhaṁ suptatāṁ cāṅgēṣu,  
ṣaṭpadapipīlikābhiścaśarīramūtrābhisaṇām, mūtrē ca mūtradōṣān, visraṁ  
śarīragandhaṁ, nindrām, tandrām ca sarvakālamiti॥४७॥

Trayastu khalu doShAH prakupitAH pramehAnabhinirvartayiShyanta imAni  
pUrvarUpANI darshayanti; tadyathA- jaTilbhAvaM kesheShu, mAdhuryamAsyasya,  
karapAdayoH suptatAdAhau, mukhatAlukaNThashoShaM, pipAsAm, AlasyaM, malaM  
kAye, kAyacchidreShUpadehaM, paridAhaM suptatAM cA~ggeShu,  
ShaTpadapipiIlikAbhishca sharIramUtrAbhisaraNaM, mUtre ca mUtradoShAn, visraM  
sharIragandhaM, nindrAM, tandrAM ca sarvakAlamiti॥४७॥

The three vitiated *doshas*, while causing *prameha*, produce the following prodromal symptoms:

1. Matting of hair;
2. Sweet taste in the mouth;
3. Numbness and burning sensation in hands and feet;
4. Dryness in mouth, palate, and throat;
5. Thirst and laziness;
6. Increased amount of bodily waste excretion from the body sweat pores;
7. Adherence of bodily wastes to the orifices of the body (like ear, eyes, nose and body pores)
8. Burning sensation and numbness in various organs of the body;
9. Attraction of insects and ants to the body and urine;
10. Appearance of turbidity or other abnormalities in the urine;
11. Smell of raw flesh in the urine; and
12. Excessive sleep and continuous drowsiness. [47]

### General Complications and Principles of Treatment

उपद्रवास्तुखलुप्रमेहिणांतृष्णातीसारज्वरदाहदौर्बल्यारोचकाविपाकाः  
पूतिमांसपिडकालजीविद्रैयादयश्चतत्प्रसङ्गादभवन्ति॥४८॥

तत्र साध्या न प्रमेहान्संशोधनोपशमनैर्यथार्ह मुपपादयं शिचकित्सेदिति ॥४९॥

upadravāstu khalu pramēhiṇāṁ ṛṣṇātīsārajvaradāhadaurbalyārōcakāvipākāḥ  
pūtimāṁsapiḍakālajīvidradhyādayaśca tatprasaṅgādbhavanti ॥४८॥

tatra sādhyān pramēhān  
saṁśodhanōpaśamanairyathārhamupapādayaṁścikitsēditi ॥४९॥

UpadravAstu khalu pramehiNAM tRuShNAtsArajvaradAhadaurbalyArocakAvipAkAH  
pUtimAMsapiDakAlajIvidradhyAdayashca tatprasa~ggAdbhavanti ॥४८॥

tatra sAdhyAn pramehAn  
saMshodhanopashamanairyathArhamupapAdayaMshcikitsediti ॥४९॥

Complications associated with *prameha* are thirst, diarrhea, fever, burning sensation, weakness, anorexia, and indigestion. Carbuncles that putrify muscle tissues, like *alaji* and *vidradhi*, appear during the chronic stage of the disease.

Of all these variants, the curable types of *prameha* should be treated with the appropriate elimination and alleviation therapies on time. [48-49]

### Consequences of *Prameha*

भवन्ति चात्र- गृद्धनुमभ्यवहार्येषु स्नानचङ्क्रमणद्विषम् । प्रमेहः क्षिप्रमभ्येति नीडद्रुममिवाण्डजः ॥५०॥

मन्दोत्साहमतिस्थूलमतिस्निग्धं महाशनम् । मृत्युः प्रमेहरूपेण क्षिप्रमादाय गच्छति ॥५१॥

यस्त्वाहारं शरीरस्य धातु साम्यकरं नरः । से वते विविधाश्चान्याश्चेष्टाः स सुखमश्नुते ॥५२॥

bhavanti cātra- grdhnumabhyavahāryēsu snānacaṅkramaṇadviṣam| pramēhah  
kṣipramabhyēti nīḍadrumamivāṇḍajah ॥५०॥

mandōtsāhamatisthūlamatisnidham mahāśanam| mṛtyuh pramēharūpēṇa  
kṣipramādāya gacchatii ॥५१॥

yastvāhāram śarīrasya dhātusāmyakaram naraḥ| sēvatē vividhāścānyāścēṣṭāḥ sa  
sukhamaśnute ॥५२॥

Bhavanti cAtra- gRudhnumabhyavahAryeShu snAnaca~gkramaNadvisham| pramehaH  
kShipramabhyeti nIDadrumamivANDajaH ॥५०॥

mandotsAhamatisthUlamatisnidhaM mahAshanam| mRutyuH prameharUpeNa  
kShipramAdAya gacchatii ॥५१॥

yastvAhAraM sharIrasya dhAtusAmyakaraM naraH| sevate  
vividhAshcAnyAshceShTAhsa sukhamaShnute ॥५२॥

Thus, it can be said: As the birds are attracted towards the trees where their nests are situated, similarly *prameha* is attracted to people who are gluttonous, who have an aversion to bathing, or who have an aversion to physical exercises. Death immediately comes in the form of *prameha* to those who are very lethargic and morbidly obese.

The individual who follows a dietary regimen or lifestyle that brings his *doshas* and *dhatus* to a state of equilibrium is said to be leading a healthy life. [50-52]

## Summary

तत्रश्लोकाः- हेतुव्याधिविशेषाणांप्रमेहाणांचकारणम्| दोषधातुसमायोगोरूपंविविधमेवचा||५३||

दशश्लेष्मकृतायस्मात्प्रमेहाःषट्चपित्तजाः| यथाचवायुश्चतुरःप्रमेहान्कुरुतेबली||५४||

साध्यासाध्यविशेषाश्चपूर्वरूपाण्युपद्रवाः| प्रमेहाणांनिदानेऽस्मिन्निक्रयासूत्रंचभाषितम्||५५||

tatra ślōkāḥ- hēturyādhiviśēśāṇāṁ pramēhāṇāṁ ca kāraṇam| dōṣadhātusamāyōgō rūpaṁ vividhamēva ca||53||

daśa ślēṣmakṛtā yasmāt pramēhāḥ ṣaṭ ca pittajāḥ| yathā ca vāyuścaturāḥ pramēhān kurutē balī||54||

sādhyāsādhyaviśēśāśca pūrvarūpānyupadrvāḥ| pramēhāṇāṁ nidānē'smin kriyāsūtram ca bhāṣitam||55||

Tatra shlokAH- heturvyAdhivisheShANAM pramehANAM ca kAraNam|  
doShadhAtusamAyogo rUpaM vividhameva ca||53||

Dasha shleShmakRutA yasmAt pramehAH ShaT ca pittajAH| yathA ca vAyushcaturaH  
pramehAn kurute ball||54||

sAdhyAsAdhyavisheShAshca pUrvarUpANyupadravAH| pramehANAM nidAne~asmin  
kriyAsUtraM ca bhAShitam||55||

To sum up:

In this chapter on the diagnosis of *prameha* the following topics were discussed:

1. Causative factors of the diseases and those about various types of *prameha*;
2. Combination of *doshas* and *dhatus*;
3. Signs and symptoms (of different types of *prameha*);
4. The process of manifestation of ten, six and four varieties of *prameha* caused by *kapha*, *pitta*, and *vata* respectively.
5. Prognosis, premonitory symptoms and complications; and
6. Their line of treatment. [53-55]

इत्यग्निवेशकृतेतन्त्रेचरकप्रतिसंस्कृतेनिदानस्थानेप्रमेहनिदानंनाम चतुर्थोऽध्यायः||४||

ityagnivēśakṛtē tantrē carakapratisaṁskṛtē nidānasthānē pramēhanidānam nāma  
caturtho'dhyāyah||4||

ityagniveshakRute tanre CharakapratisaMsKRoute nidAnasthAne pramehanidAnaM  
nAma caturtho~adhyAyaH||4||

Thus, ends the fourth chapter on the diagnosis of *prameha*.

## Tattva Vimarsha (Fundamental Principles)

1. *Nidana* (etiological factors), *dosha*, and *dushya* are three major factors that cause any disease. Besides these, there are temporal influences, pre-existing conditions, genetic predispositions, as well as the presence or absence of resisting factors in the host body that decide the propensity of the affliction of a disease, including *prameha*.
2. The onset of disease pathology, its severity and progress depend upon the cumulative effect of interaction between above-mentioned factors. If the disease resisting factors in the host body are stronger than the disease provoking factors, then the disease doesn't occur or occurs with less severity or with fewer symptoms. On the contrary, the disease is severe, acute, and fully manifested in the case of stronger disease provoking factors.
3. *Prameha* is a syndrome and not one disease entity. The manifestation of each of the twenty types of *prameha* depends upon the dominant *dosha*, as well as a host of etiological factors and *dushya* at play. A common theme applicable to all the types, though, is prolonged exposure to the etiological factors (excess consumption of specific dietary articles and a sedentary lifestyle). Genetic predisposition also increases the propensity of an individual getting afflicted with *prameha*.
4. Prognosis of *prameha* depends on the quantity and quality of *doshas* and the resistance capacity of *dhatus*. If they have similar site and properties, the prognosis is good due to the similarity in treatment principles. If they are dissimilar, the prognosis is bad because of contradiction in treatment principles.
5. Vitiated *kapha dosha* and *meda dhatus* form the basis of pathogenesis of *prameha*. Further, the vitiation of *pitta* and *vata dosha* is observed as per their etiological factors to manifest respective types.
6. The excessive *abaddha meda* (loose fat), *mamsa* (muscle proteins), *kleda* (body fluids), *shukra* (reproductive tissues), *shonita* (blood), *vasa* (muscle fats), *majja* (bone marrow), *rasa* (body fluid with plasma), *ojas* (vital essence of all tissues) are important factors involved in pathogenesis of *prameha*. Hence the treatment is targeted to correct the imbalances in these tissue components.
7. To treat *prameha*, the above mentioned factors with the loci in urinary system of the bladder, kidneys shall be treated well.
8. The quality and specific characteristics observed in urine are biomarkers in diagnosis and assessment of *prameha*.

## Vidhi Vimarsha (Applied Inferences)

### The process of onset of disease

*Nidana*, *dosha*, and *dushya* are the inherent factors involved in the pathogenesis of diseases. In addition to these inherent factors, the host also has antibodies and disease resisting factors in him. If the resisting factors are weak and *kala*, or temporal influences (seasonal variations, age), are strong enough for the inherent causes of the disease,

then the disease will be severe with complications and rapid progression. If all the four factors (i.e., *nidana*, *dosha*, *dushya*, and *kala*) are not strong enough then any of the following manifestations may occur:

1. No disease
2. Delayed onset
3. Mild
4. A few signs and symptoms present.

In this chapter, the importance of exogenous (disease causative agents/pathogens), endogenous (deranged body defense mechanism) factors and tissue response in the development of the disease is emphasized. The disease appears either when the exogenous factor (pathogen) is strong enough to overcome the defense mechanism of the body or when the tissue response to exogenous factors or adaptive responses to foreign agents is deranged.

### The etymology of *prameha*

In Sanskrit, the word *mih* (from which *meha* is derived) denotes water, to wet, and to emit semen. Regarding the above explanation, we can easily postulate that the disease *prameha* resulted because of an excessive excretion of something (*ati-pravrittija*). *Prameha* comprises of all those diseases that cause clinical abnormalities in urine due to derangement of metabolism at the level of tissues (*dhatvagnimandya*).

### The scope of *prameha*

*Prameha* is a complex syndrome encompassing obesity, metabolic syndrome, diabetes insipidus, alkaptonuria, hemoglobinuria, lipiduria, diabetes mellitus and more. At the gross level, *prameha* is considered an endocrinological and metabolic disorder. Classification of *prameha* as *sahaja* (hereditary) and *apathyanimittaja* (acquired) favors the correlation of *madhumeha* as diabetes mellitus. The pathological foci of the disease lie in the kidney (*vrikka*) causing the destruction of nephrons (*srotomukh pratirudhyante*).

The classification of *prameha* on the basis of onset as *sahaja/jataja pramehi madhumehi* (hereditary) and *apathyanimittaja pramehi* (acquired) could be considered analogous to the classification of diabetes conditions as congenital/ Type-I, insulin dependent diabetes mellitus (IDDM) and acquired/ Type-II, non insulin-dependent diabetes mellitus (NIDDM) respectively.

Considering the pathogenesis, two types of *prameha* patients are as given below:

#### *Sahaja prameha/ jataja pramehi (hereditary)*

In Ayurveda, the words *sahaja* and *jatah* indicate genetic predisposition to the disease.

Broadly, in hereditary diseases there may be two contributing factors:

1. A certain defect in the sperm and ovum (referred to as *bija dosha*) results in a genetic disorder or genetic predisposition to disease. Regarding *prameha*, Charak Samhita mentions that excessive indulgence in *madhura rasa* (foods/drinks with a sweet taste) by the parents is the chief cause of this chromosomal damage to the sperm and ovum.
2. An intrauterine environment that negatively affects the development of the fetus due to the mother's diet, lifestyle, or adverse psychological state during pregnancy. This congenital aspect can trigger the disease process for which there is a genetic predisposition. Regarding *prameha*, the overindulgence of *madhura rasa* by the mother during pregnancy is likely to trigger *prameha*.

The diet, lifestyle, and adverse psychological state of the mother during lactation (and only during the stage of pregnancy) may also play a decisive role in precipitating *prameha* in the infants. In addition, excessive intake of *madhura rasa* during childhood can contribute to the onset of *prameha* in children who are genetically predisposed. Thus, hereditary predisposition and unwholesome dietary and lifestyle choices, especially excessive intake of *madhura rasa*, can play a combined role to cause hereditary *prameha*. The description of *sahaja prameha* in Sushruta Samhita and *jatah prameha* in Charak Samhita are quite similar to that of type-I diabetes (also known as insulin-dependent diabetes mellitus or juvenile-onset diabetes). *Jatah pramehi madhumehino*, as defined in Charak Samhita, correlates with type-I diabetes beginning in early childhood.

#### *Apathyanmittaja prameha (acquired)*

The acquired form of *prameha* (*apathyannmittaja pramehi*), in contrast, is a lifestyle condition caused due to sedentary, or inactive living, and psychologic factors include depression and stress.

The description of *apathyannmittaja prameha* in Sushruta Samhita is very similar to that of type-II diabetes. The types of food and drink likely to precipitate this disease have been enumerated in all the classical Ayurvedic texts<sup>314 315</sup>. These are briefly listed below, along with lifestyle factors and psychological factors that lead to the onset of *prameha*

1. Dietary factors: Excessive intake of yogurt, meat of aquatic animals, milk, new grains, food/drinks containing sugar and jaggery (an unrefined form of cane sugar), cold foods, sweet foods, liquid foods, foods that are heavy to digest, and slimy foods.
2. Lifestyle factors: Sedentary lifestyle, excessive sitting, excessive sleeping, sleeping during the daytime, lack of exercise, and laziness.

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<sup>314</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>315</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

3. Psychological factors: Disturbance in mental health caused by extremes of psyche such as *vishada*(depression) and bipolar disorder.

All types of *prameha* ultimately morph into *madhumeha* which is incurable. From the standpoint of its pathology and clinical manifestation, *madhumeha* can be correlated with diabetes mellitus. Certain forms of *kaphaja prameha* could be considered to be very similar (if not identical) to maturity onset diabetes (MODY) or type -II diabetes or NIDDM. *Udakameha* is analogous to diabetes insipidus, while certain *pittaja prameha* relate to urinary tract infection and glomerulonephritis relates to diabetes and its complications (diabetic patients are more prone to developing UTI due to deranged immunity).

All the twenty types of *prameha* should be considered as distinct disorders. For example, *kalameha* can be considered as an alkaptonuria-a disease of tyrosine and phenylalanine metabolism. *Vasameha* can be considered as *lipiduria* (as in nephrotic syndrome).

#### *Causative factors of prameha/diabetes mellitus*

##### *Type I Diabetes*

Type-I diabetes is a multi-genomic disease and heredity plays an important role in determining an individual's predisposition to it. Secondly, type-I diabetes is an autoimmune disease in which insulin itself could trigger an attack on beta cells by white blood cells (T-cells)<sup>316</sup>. Finally, there are environmental factors such as foods, viruses and toxins that could trigger an early onset of the disease.<sup>317</sup>

##### *Type II Diabetes*

Food articles that are high in saturated fats, including dairy products (especially whole-milk products like cream and full-fat yogurt), red meat and meat juice (*mamsarasa*) are known to increase the probability of contracting type II diabetes. High

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<sup>316</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

<sup>317</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248. ISBN 0-86196-607-4. Oxford Journals Medicine Brain Volume 125, Issue 2 Pp. 441-442.

saturated fats lead to increase in adipose tissue secretory factors (ATSF), or resistin, that cause insulin resistance.<sup>318 319</sup>

Another important causative factor for type-II diabetes is an inactive/sedentary lifestyle. According to a World Bank report, almost 10% of all deaths reported worldwide in 2008 could be attributed to inactivity, due largely to four major diseases, including type II diabetes.<sup>320</sup>,

### Jaggery and jaggery products including sugar (*gudavaikritum*)

A study published in the International Journal of Diabetes in Developing Countries showed that jaggery and sugar have nearly the same glycemic values<sup>321</sup>. This means that when consumed, both raise blood glucose levels by approximately equal values. The only difference is that the release of glucose from jaggery is comparatively slower than sugar as it is a complex sucrose which takes longer to break down.<sup>322</sup> (Note: Glycemic Index is a unit which measures the amount of glucose released into the blood by a food source. Foods which release more glucose into the blood will have a high Glycemic Index value and vice versa.)

### The classification of *prameha*

#### *Classification by Dosha/Stage of Progression*

As for all other disease systems described in Ayurvedic texts, *prameha* has been classified according to the predominant *dosha* in the disease process. Ayurveda describes three distinct categories of *prameha* by *dosha*, i.e., *kaphaja*, *pittaja*, and

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<sup>318</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

<sup>319</sup> Sushruta. Uttara Tantra, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. Sushruta Samhita. 8th ed. Varanasi: Chaukhamba Orientalia;2005.

<sup>320</sup> Vaghbhata. Uttara Sthana, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. Ashtanga Hridayam. 1st ed. Varanasi: Krishnadas Academy;2000.

<sup>321</sup>

<sup>322</sup> extract sourced from

<http://cosbin2001.blogspot.com/2014/12/health-benefits-of-jaggery-or-gur.html>

*vataja prameha*<sup>323 324</sup>. However, it is important to note here that the dominance of a *dosha* varies as the disease progresses. In the initial stage, *kapha* is in excess, which vitiates *meda* and *kleda* causing *kaphaja prameha*.

Further progression results in the loss (or *kshaya*) of *kapha*. *Pitta* then predominates, which vitiates the blood (*rakta*), precipitating *pittaja prameha*. Further progression results in loss of *pitta*. This leads to vitiation of *vata*, which weans the body of vital substances/vital essence through urine, precipitating *vataja prameha*<sup>325</sup>. Charak says that any of these three types of *prameha* can be precipitated directly, depending upon genetic predisposition and improper diet and lifestyle.

Correlating the *doshic* classification of *prameha* with the etiology, *kaphaja* and *pittaja prameha* are always *apathyanimittaja prameha* (acquired), while *vataja prameha* can be hereditary or acquired. If *kaphaja* and *pittaja prameha* are not managed properly, in due course of time they lead to *madhumeha* (a subtype of *vataja prameha*), which is a terminal stage of the disease and is said to be incurable<sup>326</sup>. This disease can be equated with the terminal stage of type 2 diabetes, which progresses to insulin-dependent diabetes. It has been observed that in the *pittaja* stage of *prameha*, there is a tendency toward moderate hyperglycemia, which may be due to increased adrenal medullary and cortical activities. In *vataja prameha*, there may be severe hyperglycemia with hypoinsulinemia.<sup>327</sup>

As mentioned earlier, *prameha* can be correlated with obesity, metabolic syndrome, and diabetes mellitus. The early manifestation of the disease process in these conditions is characterized by lipid, carbohydrate, and protein metabolism disturbances accompanied by glycosuria, proteinuria, etc., which can be equated with a *kaphaja* condition (i.e.,

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<sup>323</sup> Shastri KN, Chaturvedi GN, Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shastri KN, Chaturvedi GN, Editors. Vidyotini Commentary Charak Samhita.1st ed. Varanasi: Chaukhamba Bharti Academy;2004.

<sup>324</sup> Shukla VD, Tripathi RD. Charak. Nidana Sthana, Cha.4 Pramehanidana ver.3. In: Shukla VD, Tripathi RD Vaidyamanorama Commentary Charak Samhita.1st ed. Delhi; Chaukhamba Sanskrit Pratisthana, 2002.

<sup>325</sup> Chandola HM, Bhatia S. Concept of Diabetes mellitus in Ayurveda and its treatment with certain indigenous drugs. AYU Int 2001;1:84-87.

<sup>326</sup> Tripathi SN, Chandola HM. Study on variations in diabetes mellitus (Prameha) with special reference to plasma insulin, cortisol and catecholamines. In Bajaj JS,ed. Diabetes mellitus in Developing Countries. New Delhi, India: Interprint, 1984:125-128.

<sup>327</sup> Sharma H, Chandola HM..Prameha in Ayurveda: Correlation with Obesity, Metabolic Syndrome, and Diabetes Mellitus.Part 1-Etiology, Classification, and Pathogenesis. The Journal of Alternative and Complementary Medicine.2011. 17(6):491-496.

which can be easily controlled and cured. *Pittaja prameha* can be correlated with the inflammatory conditions accompanied with diabetes like urinary tract infection and diabetic ketoacidosis. The advanced stage of disease, with metabolic disturbances associated with loss of immunity, correlates with type 2 diabetes that has progressed to insulin dependent diabetes, and correlates with the hereditary form of type 1 diabetes, which both correlate with *vataja prameha*. Both of these forms are incurable as described by Charak.

### *Prameha* classified according to physique

Charak Samhita has classified the patients of *prameha* into two main categories on the basis of their body constitution with regard to physique::

1. *Sthula pramehi* refers to obese diabetic patients and corresponds to individuals with Type 2 diabetes, and
2. *Krisha pramehi* refers to asthenic diabetic patients and corresponds to *krisha pramehi* corresponds to patients with Type-I diabetes.<sup>328</sup>

Research shows that sedentary lifestyle, coupled with an excessive intake of sugar-rich substances lead to a build up of toxins that could be equated to *ama* (or toxins resulting from improperly digested food and metabolic products). This *ama* then leads to the formation of *meda* (fat)<sup>329</sup>. When this resultant *meda* is also coupled with vitiated *doshas* (primarily, *kapha* and *vata*), and *agni* (the digestive processes), it provides for a conducive ground for the causation of *prameha*.

Modern scientific research also correlates insulin resistance with obesity, where insulin resistance increases with weight gain and reduces with weight loss. Hormones such as resistin (derived from adipose tissues) provide for a direct link between obesity and diabetes, as they cause insulin resistance.<sup>330</sup>

In Ayurveda, much emphasis has been given to the role of *meda* in the pathogenesis of *prameha*. However, its role is not only as a *dushya* (disturbed functioning of the *dhatus*), but something more than that. *Bahudrava shleshma* (*kapha* that contains too much liquid) joins and affects *meda*, causing it to become *abadha* (unobstructed or fluid) in nature. This form of *meda* has been described to have an effect on *mamsa* (muscle

<sup>328</sup> Kajaria Divya, Chandola H.M. Dislipidemia Cause or Consequence of Diabetes- Reanalyzing the pathogenesis with the vision of Ayurveda. Journal of Diabetes and Health, Photon. 2014.

<sup>329</sup> Pandey Rashmi, Dubey N., Tripathi NS. Ayurvedic Concept of Lifestyle Ailments and its Healing Through Traditional Regimen., 2015, Scholars Journal of Applied Medical Sciences, 3(3H):1599-1601

<sup>330</sup> Kumar Manish, Kividassanavar MB et al. Screening of Serum Insulin in Obese Individual WSR to Sthaulya: An Observational Study. 2016. European Journal of Pharmaceutical and Medical Research, 2016,3(9),638-640

tissue), thereby increasing the volume of body fluid. This has been described as *sharira-kleda* (body fluid). This route of pathogenesis for *prameha* is closely related to obesity.

### *Samprapti (pathogenesis) of prameha*

The scientific utility of this chapter lies in the fact that in *prameha* the vitiated *kapha* first vitiates *meda dhatus* followed by *mamsa* and other *dushya* and then finally vitiates *mutra* to manifest as *prameha*. This signifies that hyperglycemia is preceded by dyslipidemias. One more interesting fact is that the main culprit of the disease i.e. *kapha* is inherently denatured, means it loses its natural properties due to hereditary defect what we know today as genetic susceptibility. Furthermore, it is added that if a disease appeared due to genetic default, then it is incurable. A step ahead from the present contemporary knowledge, it is mentioned that as genetic modulation can cause disease similarly a chronic disease can cause gene modulation and vice-versa.<sup>331</sup>

### *Various dushyas involved in the pathogenesis*

#### *Meda dhatus*

*Meda* vitiation is common and dominant *dushya* in the pathogenesis of *madhumeha*. *Kapha* and *meda* both have close resemblance in regard to functions as well as in regard to qualitative parameters. Both get vitiated more or less by same etiological factors. In *madhumeha* vitiation of *meda* results by two ways:<sup>332</sup>

1. Qualitative: *Abaddha* (loose): The normal function of *meda* is to produce unctuousness in the body along with *drudhatva* (compactness). This *abaddhatva* (looseness) causes derangement in the structure of *meda* producing *shaithilya* (flabbiness) in the body this can be well correlated with FFA excess.<sup>333</sup>
2. Quantitative: *Bahu*(excess): Here in the pathogenesis, *meda* is in excess quantity. This *meda dhatus* is *aparipakva* (immature). It obstructs the path of *vayu* along with *kapha*. This provoked *vata* increases the *agni*, so patient eats more and more food causing excessive deposition of *aparipakva meda*. This in turns causes severe depletion of the other *dhatus* and produces various sign and symptoms.

Excess of fat in the body get converted into FFA and is utilized in energy metabolism especially in the muscles causing retention of glucose in the blood. Increased appetite in *medoroga* is due to increased body demand, which is explained to be due to hyperinsulinism or increased secretion of growth hormone. Diabetes has been compared with the fasting state of the body, ketosis is nothing else but the advanced

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<sup>331</sup> extracts from [http://www.jbsoweb.com/admin/php/uploads/215\\_pdf.pdf](http://www.jbsoweb.com/admin/php/uploads/215_pdf.pdf)

<sup>332</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

<sup>333</sup> sourced from <http://www.slideshare.net/ayurmitra/madhumeha-kc041-gdg>

fasting stage of the body, so the deleterious effect of long fast specially in the patient of obesity is same as in diabetic stage.

### *Mamsa*

dhatu

It is one of the main *dushyas* (vitiating factors) described by Charak in regards to *prameha*. He narrated it especially in *kaphaja prameha* and *avaranjanya madhumeha*. *Mamsa* and *Kapha* possess similar qualities and both give strength to the body. When vitiated, *mamsa* loses its normal consistency and develops *shaithilya* and provide space in between for the accumulation of morbid matter. That in turn results in *putimamsa pidika*. [Cha.Sa.Nidana Sthana 4/8] *Mamsa dushti* can be compared to deranged protein metabolism which is an integral part of diabetes mellitus. Research studies have found that glucocorticoid activities and acidosis stimulates protein and amino acid catabolism<sup>334</sup>. Amino acids breakdown in liver results in increased production of urea<sup>335</sup> and these free amino acids can be compared with *abaddha mamsa*. *Putimamsa* and *pidaka* are the morbid states of *mamsa dhatu*. Two major changes take place in *mamsa dhatu* - protein degradation and reduction in its blood supply, both of which along with elevated blood sugar level form a favorable media for the growth and multiplication of microorganisms. The results are putrefaction and evolution of multiple septic foci in *mamsa dhatu*. Diminished protein synthesis hampers the healing process and these complications adopt chronic course.

### *Majja*

dhatu

*Majja dhatu* is not vitiated to maximum extent but *vata* causes its *kshaya* i.e. depletion. Thus vitiated *majja* produces symptoms like *netragaurava* (heaviness in eyes), *angagaurava*(heaviness in body) in patient of *madhumeha*. The ketone bodies production due to excessive utilization of fat may be referred to *dushti* of *vasa* and *majja*. *Murchcha* (temporary loss of consciousness) occurs due to dushti of *majja* in diabetes mellitus. The condition of hyperglycemic coma is characterized by the accumulation of ketone bodies.

### *Shukra*

*Shukra* also get vitiated in the pathogenesis and produces symptoms like *daurbalya* (fatigue) and *krichavyavayata* (difficulty in sexual intercourse), because normal functions of *shukra* is to maintain *dehabala*. It also plays role in the precipitation of

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<sup>334</sup> May, RC et al. 1996. Glucocorticoids and acidosis stimulate protein and amino acid catabolism in vivo. Kidney Int. 1996 Mar;49(3):679-83.

<sup>335</sup> Vaudevan et al. 2011. Textbook of biochemistry for medical students, Sixth Edition, JP Medical Publishers

*sahaja* (genetic) *prameha*. Sexual impotency and testicular hypofunctions have been reported in diabetes mellitus.

### *Ojas*

*Ojas* as *dushya* is mainly involved in *vataja prameha* i.e. *ojomeha* (*madhumeha*). The symptoms of *ojakshaya* manifests, like *gurugatrata* (heaviness in body), *nidra* (sleepiness), *tandra* (drowsiness) and *daurbalya* (fatigue) can be correlated with immunocompromised stage in diabetes mellitus due to deranged immunity.

### *Kleda*

This is one of the body components mainly involved in the pathogenesis. The literary meanings of *kleda* are wetness, moisture and dampness etc. The physiology of *kleda* is mainly related with *mutra* and *sweda* along with *meda*. Thus, when *kleda* is involved then it directly affects the above factors. In normal physiology *mutra* and *sweda* maintain the balance of *kleda*. Especially *sweda* holds it in the body and *mutra* gets excreted out of the body according to the body condition and requirement. If *kleda* gets vitiated it directly affects the physiology of *mutra* and *sweda* and disrupts the assemblage of bodily elements causing *shaithilya*. Thus, the symptoms manifest due to *kleda* vitiation are *prabhatamutrata* (polyuria), *swedavrddhi* (increased sweating), *shaithilya* (weakness), *daurgandhya* (bad smell) and *avilamutrata* (polyuria).

The glycosuria raises the *osmolar* concentration of the urine and osmotic diuresis resulting in water and sodium loss along with potassium leads to generalized weakness in the patient of diabetes mellitus. The level of catecholamines is increased in DM causes excessive sweating that further leads to loss of electrolytes such as sodium and chlorides through the skin. The whole phenomenon described under *kleda* can be correlated with water and electrolyte imbalance.

### *Vasa*

Charak described it as a subtype of *vatajaprameha* i.e. *vasameha*. *Vasa* is the *upadhatu* (minor tissue or sub-tissue) of *mamsa* and the unctuousness present in the *mamsa dhatus* is called *vasa*.

### *Lasika*

This is one of the liquid component present just beneath the skin. *Lasika* also get vitiated by *vata* resulting *lasikameha*. There is no direct reference related to *vasa* and *lasika dushti*.

### *Exclusion of asthi as a dushya*

Among the ten *dushyas* of *prameha*, *asthi* (bone) is not included. According to modern physiology, bone is a tissue that undergoes frequent remodeling and has a large capacity for regeneration. In the adult remodeling occurs so that the skeleton is replaced approximately every 10–11 yr. This physiological remodeling is initiated by osteoclasts that re-absorb bone and is followed by the formation of an equivalent

amount of new bone by osteoblasts,<sup>336 337</sup> bone loss is noted when the amount of bone resorption exceeds the amount of new bone formation.

Diabetes has also been associated with a net loss of bone. A number of studies have reported that type 1 diabetes alters bone remodeling by reducing the formation of new bone, leading to osteopenia. This has been shown by a decrease in bone mineral density in humans and alterations in the formation of new bone in animal studies<sup>338 339 340 341</sup>. In contrast, the presence of bone loss in type 2 diabetes is less clear, and current understanding suggests that this form of diabetes is not typically associated with osteopenia<sup>342 343 344 345</sup>. The reasons for the lower bone mineral density in type 1 diabetes are not known.

### *Vataja prameha vis a vis type 1 diabetes mellitus*

The pathogenesis of *vataja prameha* is similar to that of type-1 diabetes mellitus. *Vata* is agitated due to various precipitating causes acts on the body in such a way that there is passage of *vasa* (fat), *majja* (bone marrow), *lasika* (lymph), and *ojas* (essence of the

<sup>336</sup> Parfitt A. 1982 The coupling of bone formation to bone resorption: a critical analysis of the concept and of its relevance to the pathogenesis of osteoporosis. *Metab Bone Dis Relat Res* 4:1–6.

<sup>337</sup> Mundy G 1989 Local factors in bone remodeling. *Rec Prog Horm Res* 45:507–531.

<sup>338</sup> Hayward M, Fiedler-Nagy C 1987 Mechanisms of bone loss: rheumatoid arthritis, periodontal disease and osteoporosis. *22:251–254.*

<sup>339</sup> Tuominen J, Impivaara O, Puukka P, Ronnenmaa T 1999 Bone mineral density in patients with type 1 and type 2 diabetes. *Diabetes Care* 22:1196–1200.

<sup>340</sup> Krakauer J, McKenna M, Burderer N, Rao D, Whitehouse F, Parfitt A 1995 Bone loss and bone turnover in diabetes. *Diabetes* 44:775–782.

<sup>341</sup> Macey L, Kana SM, Jingushi S, Terek RM, Borretos J, Bolander ME 1989 Defects of early fracture-healing in experimental diabetes. *J Bone Joint Surg Am* 71:722–733.

<sup>342</sup> Gebauer G, Lin S, Beam H, Vieira P, Parsons J 2002 Low-intensity pulsed ultrasound increases the fracture callus strength in diabetic BB Wistar rats but does not affect cellular proliferation. *J Orthop Res* 20:587–592.

<sup>343</sup> Barrett-Conner E, Holbrook T 1992 Sex differences in osteoporosis in older adults with non-insulin-dependent diabetes mellitus. *JAMA* 268:3333–3337.

<sup>344</sup> Loe H 1993 Periodontal disease. The sixth complication of diabetes mellitus. *Diabetes Care* 16:329–334.

<sup>345</sup> Nelson R, Shlossman M, Budding L, Pettitt DJ, Saad MF, Genco RJ, Knowler WC1990 Periodontal disease and NIDDM in Pima Indians. *Diabetes Care* 13:836–840.

body /immune substances / vitality) through the urine. This condition indicates impaired renal function as a result of diabetes, leading to a dire prognosis. Due to *dhatukshaya* (loss of body tissues) the patient become very weak and emaciated.

Charak Samhita deals with very specific pathogenesis for *madhumeha*, which is a subtype of *vataja prameha*. When an individual excessively consumes the foods that cause *prameha*, [*kapha*] and *pitta* become vitiated, then adipose tissues and muscle tissues become disturbed and causes impaired functioning of *vata*. Subsequently *vata* gets vitiated and extends to urinary bladder along with *ojas*, resulting in *ojas* being expelled in the urine. In Ayurveda, *ojas* is considered vital to the maintainence of health; its loss in *prameha* leads to many complications, including *prameha pidika* (boils and carbuncles). This advanced condition is comparable to non-insulin –dependent type -2 diabetes progressing into insulin dependent diabetes. It is the stage of diabetes in which there are complications, including nephropathy, which result in vital substances of the body being excreted through urine.

Among patients with significant proteinuria, the degeneration of cells within epithelial casts may result in a characteristic “Maltese Cross” appearance and a fatty cast. These droplets are composed of cholesterol esters and cholesterol, which may also be observed free in the urine. This may be correlated with *vasameha* (lipiduria). *Majjameha* can be correlated with appearance of waxy casts in urine in advanced renal failure. Waxy cast are thought to be the last stage of the degeneration of a granular cast. Since this degenerative process is probably slow, it is most likely observed in nephrons with much diminished flow. Waxy casts are therefore most consistent with the presence of advanced renal failure.<sup>346</sup>

*Hastimeha* can be correlated with polyuria in diabetic ketoacidosis due to osmotic diuresis and electrolyte imbalance. Insidious increased thirst (i.e. polydipsia) and urination (i.e. polyuria) are the most common early symptoms of diabetic ketoacidosis (DKA).<sup>347</sup>

### *Poorvarupa* (prodromal symptoms) of *prameha*

For *prameha*, these symptoms include excessive sweat, body odor, laziness, inclination towards rest, presence of excessive *malas* (waste products) in the eyes, ears, teeth, throat, palate, and tongue (buccal cavity), excessive growth of hair and nails, matting of the hair, excessive thirst, a sweet taste in the mouth, a burning sensation in the hand and feet, attraction of insect and ants toward the body and urine, and so on. Diabetes has close relationship to conditions within the oral cavity. It leads to adverse changes in gums and periodontal tissues: effects that may be evident even before clinical diabetes

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<sup>346</sup> <https://www.slideshare.net/sprince33/glomerulonephritis> accessed on 12 June 2017

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<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

is recognized and diagnosed.<sup>348</sup> Periodontal diseases are associated with higher levels of insulin resistance and are often a precursor of type 2 diabetes as well as with the higher levels of glycated hemoglobin<sup>349</sup>. These findings may relate to the prodromal symptoms of excessive excretion of *malas* in the buccal cavity. A sweet taste in the mouth is a prodromal symptom that may be explained by the presence of glucose of saliva. If blood glucose levels are high, glucose is also present in the saliva, which can increase cavities and increase the risk of oral candidiasis.

A burning sensation in the hands and feet is an important feature of neuropathy that results from diabetes mellitus. Excessive sweat as a consequence of obesity may result in bacterial growth that leads to body odor. Excessive thirst may be directly related to disturbed glucose metabolism. Thus, the symptoms described in the *poorvarupa* of *prameha* include prediabetic symptoms and the early manifestation (vascular changes, obesity, etc.) of diabetes or subclinical diabetes.

The role of *meda* (fat/adipose tissues) is of great importance in the pathogenesis of *prameha*. Its role is not as *dushya* (disturbed functioning of the *dhatus*), but something more than that. According to Charak Samhita, *bahudrava shleshma* (kapha that contains too much liquid) joins and affects *meda*, causing it to become *abaddha* (unobstructed or fluid) in Ayurveda. This has been described as *sharira-kleda* (body of fluid) in Ayurveda. Thus, excess water in the blood causes increased diuresis. It is very important to elaborate the term *bahudrava shlesma*. *Shleshma/kapha* is one among the three basic humors regulating all physiological and psychological process in the living organism. At its normal state, it causes binding of body tissues i.e. maintain the tissues integrity, represent the normal cell mediated immunity etc. *Bahudrava* means that *kapha* loses its natural properties and get vitiated, it is important to mention here that this derangement may be acquired or congenital, Whatever may be the cause this vitiated *kapha*, it is unable to perform its normal functions. Describing the physical properties of *kapha* it is mentioned that it is unctuous in touch and looks like *ghrita* (ghee). Thus, it can be said that [*kapha*] in body represents lipid components of the body and vitiated *kapha* can be correlated with dyslipidemia. Role of dyslipidemia and metabolic abnormalities in the pathogenesis of diabetes is very obvious and well elaborated in modern medicine. Among the metabolic abnormalities that commonly accompany diabetes are disturbances in the production and clearance of plasma lipoproteins. Moreover, development of dyslipidemia may be a harbinger of future diabetes. A characteristic pattern, termed diabetic dyslipidemia, consists of low high density lipoprotein (HDL), increased triglycerides, and postprandial lipemia. This pattern is most

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<https://www.coursehero.com/file/pd3u7l/Ketones-include-acetone-beta-hydroxybutyrate-and-acetoacetate-Progressive-rise> accessed on 12 June 2017

<sup>349</sup> Hampton T. Studies probe oral health diabetes link. JAMA 2008; 300:2471-2473.

frequently seen in type 2 diabetes and may be a treatable risk factor for subsequent cardiovascular disease.<sup>350</sup>

### Causes of lipoprotein abnormalities in diabetes<sup>351</sup>

Defects in insulin action and hyperglycemia could lead to changes in plasma lipoproteins in patients with diabetes. Alternatively, especially in the case of type 2 diabetes, the obesity/insulin-resistant metabolic disarray that is at the root of this form of diabetes could, itself, lead to lipid abnormalities exclusive of hyperglycemia.

The lipoprotein abnormalities commonly present in type 2 diabetes, previously termed noninsulin-dependent diabetes mellitus, include hypertriglyceridemia and reduced plasma HDL cholesterol. In addition, low density lipoprotein (LDL) are converted to smaller, perhaps more atherogenic, lipoproteins termed small dense LDL. In contrast to type 1 diabetes, this phenotype is not usually fully corrected with glycemic control. Moreover, this dyslipidemia often is found in predabetics, patients with insulin resistance but normal indexes of plasma glucose. Therefore, abnormalities in insulin action and not hyperglycemia per se are associated with this lipid abnormality. Several factors are likely to be responsible for diabetic dyslipidemia: insulin effects on liver apoprotein production, regulation of lipoprotein lipase (LpL), actions of cholesteryl ester transfer protein (CETP), and peripheral actions of insulin on adipose and muscle.

### Different colors of Urine

#### *White*

- Phosphaturia is usually intermittent, occurring following a meal or after ingesting a large quantity of milk.<sup>352</sup>
- Pyuria (abundant white blood cells) in association with an infection of the urinary tract.
- White cloudy urine can rarely be due to chyluria (lymph fluid), resulting from a communication with between the lymphatic system and the urinary tract.<sup>353</sup>

#### *Red / Pink*

- The presence of red cells, free hemoglobin (from broken down red blood cells), or myoglobin (from broken down muscle cells)
- Hemoglobinuria - urinary tract infection, urinary stone, or urinary malignancy.

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<sup>350</sup> <http://press.endocrine.org/doi/10.1210/jcem.86.3.7304> accessed on 12 June 2017

<sup>351</sup> Goldberg J.Ira . Diabetic Dyslipidemia: Causes and Consequences .The Journal of Clinical Endocrinology & Metabolism. 2001. 86 (3): 965-971.

<sup>352</sup>

[http://doctor.ndtv.com/faq/ndtv/fid/8091/What\\_is\\_the\\_cause\\_for\\_white\\_cloudy\\_urine.html](http://doctor.ndtv.com/faq/ndtv/fid/8091/What_is_the_cause_for_white_cloudy_urine.html) accessed on 12 June 2016

<sup>353</sup> <http://ehealthforum.com/health/topic35228.html> accessed on 12 June 2016

### *Blue / Green*

- An inherited form of high calcium (called “familial hypercalcemia”) can result in blue urine, which has lent this disease the nickname “blue diaper syndrome”. Another metabolic disorder, indicanuria, can cause blue urine due to tryptophan indole metabolites.<sup>354</sup>

### *Brown /Black*

- Melanin and melanogen, found in the urine of patients with melanoma, will darken standing urine from the air-exposed surface downward.<sup>355</sup>
- Alcaptonuria, a rare hereditary disease, the urine will turn dark after being exposed to the air over a period of time due to the presence of homogentisic acid.<sup>356</sup>
- Urinary hydroxyphenylpyruvic acid excretion due the metabolic disorder tyrosinosis will also cause urine to be brown-black in color.
- In porphyria cutanea tarda, the urine will appear reddish brown in natural light but fluoresces pink under ultraviolet light.

## **Prognosis**

On the basis of prognosis, patients of *prameha* have been classified into three groups: *Sadhyā* (curable), *Yapyā* (controllable), and *Asadhyā* (difficult to manage).

### *Features of Prameha Classified on the Basis of Prognosis*

|   | Sadhyā(curable) | Yapyā(controllable) | Asadhyā(difficult to manage)   |
|---|-----------------|---------------------|--|
| Dosha predominance                      | Kaphaja         | Pittaja             | Vataja   |
| Body constitution according to physique | Obese           |                     | Asthenic   |
| Etiology                                | Acquired        | Acquired            | Hereditary (type-1 diabetes)<br>Acquired (advanced, insulin-independent) |

<sup>354</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

<sup>355</sup> <https://answers.yahoo.com/question/index?qid=20100106090425AACh3og> accessed on 12 June 2016

<sup>356</sup> <http://www.freerepublic.com/focus/f-chat/1424388/replies?c=1> accessed on 12 June 2016

|                          | Sadhyा(curable)  | Yapya(controllable)                             | Asadhyा(difficult to manage)<br>t stage of type-2diabetes) |
|--------------------------|--|---|--|
| Stage of disease process | Early/ without complications   | Acute/ young adults                             | Chronic/ advanced with complications                       |
| Clinical manifestation   | Mild hyperglycemia due to disturbed carbohydrate and fatty acid metabolism<br>Hyperinsulinemia | Moderate hyperglycemia due to hyperadrenalinism | Severe hyperglycemia due to hypoinsulinemia                |

## Future Scope for Research

1. Assessment criteria for the classification of various types of Prameha based on both physical as well as laboratory parameters.
2. Scaling the Prameha on the basis of modern investing tools so that the management can be done on the basis of classification.
3. Comparison of Purvarupa (prodromal signs & symptoms) of Prameha with that of Pre-diabetic stage of diabetes and establishing the laboratory parameters for its diagnosis so that Diabetes can be successfully prevented.
4. Searching Genes common for Diabetes and Dyslipididemia and collecting data of prevalence of diabetes associated with dyslipidemia.
5. Collecting data to search the most prevalent type of dyslipidemia in diabetes.
6. Retrospective clinical study to establish the fact that dyslipidemia is the cause of diabetes and not the consequence of diabetes.

## Related Chapters

- Prameha Chikitsa
- Kiyanta Shiraseeya Adhyaya

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## Kushtha Nidana

### Nidana Sthana Chapter 5. Diagnosis and etiopathogenesis of Skin diseases

#### Abstract

This chapter deals with diagnosis of skin disease termed as Kushtha. The disease has variable manifestations on skin depending upon degree of involvement of three vitiated dosha and their effect on four vitiated factors i.e. rasa, rakta, mamsa and lasika (lymphatic system). On the basis of clinical manifestations and severity, kushtha is classified into seven major types, eleven minor types or innumerable types due to the permutation and combination of dosha predominance and involvement of particular quality of a dhatu and accretion of dosha at different sites. The etiopathology, prodromal symptoms (purvarupa), symptomatology of seven major types of kushtha (maha-kushtha), their dosha predominance, prognosis, complications and significance of early treatment are described in this chapter. **Keywords:** *Kushtha, Mandal, Kapala, Kakanak, Audambar, Rishyajihva, Pundareeka, Sidhma*, causes of skin diseases, discoloration of skin.

#### Introduction

The term ‘kushtha’ literally means disfigurement of skin. Thus all the dermatological manifestations have been clubbed under the term kushtha. For which Charak has devoted two full chapters, the fifth chapter in Nidana Sthana dealing with the etiopathogenesis and the seventh chapter in the Chikitsa Sthana deals with etiopathogenesis and treatment. Dermatological diseases have been classified into four groups, which include seven types of kushtha (dermatosis), seven types of *visarpa* (a form of acute dermatitis like erysipelas), seven types of *pidaka* (papular presentations) and three types of *kilasa* (vitiligo) (Sutra Sthana 19/3). However, looking to the clinical importance, acuteness and progression, one full chapter has been devoted to *visarpa*, one of the major dermatological conditions. [Cha.Sa.Chikitsa Sthana 21] Some other clinical presentations like Urticaria (*udarda, kotha*), *nilika* (bluish discoloration of the skin), *tilalklaka* (mole), *piplu* (port wine mark on skin), *vyanga* etc. have also been explained briefly at other places. Detailed description and classification of *pidaka* (papules) is given in the seventeenth chapter of Sutra Sthana.

Some scholars like William Monier and others have translated the word kushtha as leprosy which is incorrect, because skin manifestations of advanced kushtha resemble leprosy, but there is absence of Mycobacterium leprea. In advanced stages of kushtha, secondary infection with bacteria occurs (*jantudagdha* or eaten by microorganism). Skin disorders are innumerable, and accordingly a broad pathogenesis and management has been described. Among the two broad groups, *Mahakushtha* (major dermatosis) has seven types which include the conditions where all the seven pathological components are involved. The disease progresses beyond the skin and may lead to destruction of limbs. Whereas *kshudra-kushtha* (minor dermatosis) has eleven types

which includes the conditions where some of the seven pathological components are involved, have few symptoms, disease runs a chronic course and is usually curable. kushtha is described in such a fashion that it may explain any of the dermatological conditions of present era. Their pathological features can be ascertained and treatment protocol can be established.

The concept of micro-organism and parasitology was established by Charak and he had the knowledge that micro-organisms are responsible for the causation of dermatological manifestations [Cha.Sa. Vimana Sthana 7/11]. Their treatment is to be followed like the treatment of kushtha. In the symptomatology of kushtha presence of *krimi* is described as one of the symptoms, which denotes visible worms usually maggots (*samsvedaja krimi*).

## Sanskrit Text, Transliteration and English Translation

अथातः कुष्ठनिदानं व्याख्यास्यामः॥१॥

इति ह स्माह भगवानात्रेयः॥२॥

athātah kuṣṭhanidānam vyākhyāsyāmahi||1||

iti ha smāha bhagavānātrēyah||2||

athAtaHkuShThanidAnaMvyAkhyAsyAmaH||1||

iti ha smAhabhagavAnAtreyaH||2||

Now we shall expound the chapter “Kushtha Nidana” (Diagnosis and etiopathogenesis of Skin diseases). Thus said Lord Atreya.[1-2]

### Pathogenic factors in kushtha

सप्त द्रव्याणि कुष्ठानां प्रकृतिर्विकृतिमापन्नानि भवन्ति। तद्यथा- त्रयो दोषा वातपित्तश्लेष्माणः प्रकोपणविकृताः, दूष्याश्च शरीरधातवस्त्वङ्मांसशोणितलसीकाश्चतर्धा दोषोपघातविकृता इति। एतत् सप्तानां सप्तधातुकमेवङ्गतमाजननं कुष्ठानाम्, अतःप्रभवाण्यभिनिर्वर्तमानानि केवल शरीरमुपतपन्ति॥३॥

sapta dravyāṇi kuṣṭhānāṁ prakṛtirvikṛtimāpannāni [1] bhavanti| tadyathā- trayō dōṣā vātapittaśleṣmāṇah prakōpaṇavikṛtāḥ,  
dūṣyāścaśārīradhātavastvañmāṁsaśōṇitalasīkāścaturdhā [2] dōṣōpaghātavikṛtā iti| ētat saptānāṁ saptadhātukamēvaṅgatamājananāṁ kuṣṭhānām,  
ataḥprabhavāṇyabhinirvartamānānikēvalāṁ śārīramupatapanti||3||

saptadravyANikuShThanAMprakRutirvikRutimApannAnibhavanti| tadyathA-  
trayodoShAvAtapittashleShmANaHprakopaNavikRutAH,  
dUShyAshcasharIradhAtavastva~gmAMsashoNitalasIkAshcaturdhAdoShopaghAtavikR  
utAiti| etatsaptadhAtukameva~ggatamAjananaMkuShThanAm,  
ataHprabhavANyabhinirvartamAnAnikevalaMsharIramupatapanti||3||

The pathology of skin diseases origin from the deranged physiology of seven factors connected to skin. They are *vata*, *pitta* and *kapha doshas* in aggravated state and *dhatus*, namely, *tvak* (the word *tvak* represents skin. Since the skin is organ in which *rasa dhatus* is present, *tvak* word is used instead of *rasa dhatus*), *mamsa*, *shonita* and *lasika* that get deranged due to aggravated *dosha*. So seven type of kushtha are manifested by these seven morbid factors. Thus preliminary and manifested kushtha gradually afflicts the whole body. [3]

## Possible types of kushtha

न च किञ्चिदस्ति कुष्ठमेकदोषप्रकोपनिमित्तम्, आस्ति तु खलु समानप्रकृतीनामपि कुष्ठानां  
दोषांशांशविकल्पानबन्धस्थानविभागेन वेदनावर्णसंस्थानप्रभावनामचिर्किञ्चित्विशेषः। स  
सप्तविधोऽष्टादशविधोऽपरिसङ्ख्येयविधो वा भवति। दोषा हि विकल्पविकल्प्यमाना विकल्पयन्ति  
विकारान्, अन्यत्रासाध्यभावात्। तेषां विकल्पविकारसङ्ख्यानेऽतिप्रसङ्गमभिसमीक्ष्य सप्तविधमेव  
कुष्ठविशेषमुपदेश्यामः॥४॥

na ca kiñcidasti kuṣṭhamēkadōṣaprakōpanimittam, asti tu khalu samānaprakṛtīnāmapi  
kuṣṭhānāṁdōṣāṁśāṁśavikalpānubandhasthānavibhāgēna  
vēdanāvarṇasāṁsthānaprabhāvanāmacikitsitaviśeṣah| sa  
saptavidhō'ṣṭādaśavidhō'parisaṅkhyeyavidhō vā bhavati| dōṣā hi  
vikalpanairvikalpyamānā vikalpayanti vikārān, anyatrāśādhyabhāvāt| tēṣāṁ  
vikalpavikārasaṅkhyānē'tiprashaṅgamabhisamīkṣya  
saptavidhamēvakuṣṭhaviśeṣamupadēkṣyāmah||4||

na caki~jcidaṣtikuShThamekadoShaprakopanimittam,  
astitukhalusamAnaprakRutInAmaṇi  
kuShThanAMdoShAMshAMshavikalpAnubandhasthAnavibhAgenavedanAvarNasaMsth  
AnaprabhAvanAmacikitsitavisheShaH|  
sasaptavidho<sub>aShTAdashavidho</sub>aparisa~gkhyeyavidhovAbhavati| doShA hi  
vikalpanairvikalpyamAnAvikalpayantivikArAn, anyatrAsAdhyabhAvAt|  
teShAMvikalpavikArasa<sub>gkhyAne</sub>atiprasha~ggamabhisamIkShyasaptavidhamevakuShThavis  
heShamupadekShyAmaH||4||

Variation in single *dosha* cannot cause kushtha. Even in kushtha with similar presentations, the clinical features in terms of sensation in skin, colour, site of skin lesion, other symptoms, and treatment may vary depending on the variation in vitiation of (qualities of) *dosha*. Therefore there are seven or eighteen or innumerable types of kushtha. The variations in qualities of vitiated *dosha* lead to further differentiation in types of diseases, except in incurable conditions. As there might be innumerable types of kushtha leading to expansion of text, only seven types of kushtha are described here. [4]

## Seven types of kushtha

इह वातादिषु त्रिषु प्रकृपितेषु त्वगादींश्चतुरः प्रदूषयत्सु वातेऽधिकतरे कपालकुष्ठमभिनिर्वर्तते, पित्ते  
त्वौदुम्बरं, श्लेष्मणि मण्डलकुष्ठं, वातपित्तयोरूष्यजिह्वं, पित्तश्लेष्मणोः पुण्डरीकं,

श्लेष्ममारुतयोःसिद्धमक्षणं, सर्वदोषाभिवृद्धौ काकणकमभिनिर्वर्तते; एवमेष सप्तविधः क्षणविशेषो भवति। स चैष भूयस्तरतमतः प्रकृतौ विकल्प्यमानायां भूयसीं विकारविकल्पसङ्ख्यामापद्यते॥५॥

iha vātādiṣu triṣu prakupitēṣu tvagādīṁścaturaḥ pradūṣayatsu  
vātē’dhikatarēkapālakuṣṭhamabhinirvartatē, pittē tvaudumbaraṁ, ślēṣmaṇi  
maṇḍalakuṣṭhaṁ, vātapittayōruṣyajihvaṁ, pittaślēṣmaṇōḥ puṇḍarīkaṁ,  
ślēṣmamārutayōḥ sidhmakuṣṭhaṁ, sarvadōṣābhivṛddhaukākaṇakamabhinirvartatē;  
ēvamēṣa saptavidhaḥ kuṣṭhaviśeṣō bhavati] sa [1] caiṣa bhūyastaratamatāḥ prakṛtau  
vikalpyamānāyāṁ bhūyasīṁ vikāravikalpasaṅkhyāmāpadyatē||5||

ihavAtAdiShutriShuprakupiteShutvagAdIMshcaturaHpradUShayatsuvAte~adhikatareka  
pAlakuShThamabhinirvartate, pittetvaudumbaraM, shleShmaNimaNDalakuShThaM,  
vAtapittaylorRuShyajihvaM, pittashleShmaNoHpuNDarlkaM,  
shleShmamArutayoHsidhmakuShThaM,  
sarvadoShAbhivRuddhaukAkaNakamabhinirvartate;  
evameShasaptavidhaHkuShThavisheShobhavati]  
sacaiShabhUyastaratamatāHprakRutauvikalpyamAnAyAMbhUyasIMvikAravikalpasa~g  
khyAmApadyate||5||

When *vata* and other *doshas* are aggravated and affect four vitiated *dhatus* such as *twak*, and there is dominance of *vata dosha*, then the disease is known as *kapala kushtha*. Similarly *dosha* dominance with other six diseases are explained in the table below:

Table 1: The major skin diseases and its dosha dominance.

| Skin diseases | Dosha dominance |
|---------------|-----------------|
| Kapala        | Vata            |
| Udumbara      | Pitta           |
| Mandala       | Kapha           |
| Rushyajihva   | Vata-pitta      |
| Pundarika     | Pitta-kapha     |
| Sidhma        | Kapha-vata      |
| Kakanaka      | all doshas      |

Thus, there are seven types of specific *kushtha*, however depending on degree of superior and inferior involvement of etiology, permutation and combinations *kushtha* may be innumerable. [5]

### Common etiological factors of *kushtha*

तत्रेदं सर्वकष्ठनिदानं समासेनोपदेक्ष्यामः- शीतोष्णाव्यत्यासमनानुपूर्व्योपसेवमानस्य तथा सन्तर्पणापैतर्पणाऽयवहार्यव्यत्यासं, मधुफाणितमत्स्यलकुचमूलककाकमाचीः सततमतिमात्रमजीर्ण च समश्नतः, चिलिचिमं च पयसा, हायनकयवकचीनकोद्दालककारदूषप्रायाणि चान्नानि

क्षीरदधितक्रकोलकुलत्थमाषातसीकुसम्भस्नेहवन्ति, एतैरेवातिमात्रं सुहितस्य च  
व्यवायव्यायामसन्तापानत्यपसेवमानस्य, भयश्रमसन्तापोपहतस्य च सहसा शीतोदकमवतरतः, विदग्धं  
चाहारजातमनुल्लिख्य विदाहीन्यभ्यवहरतः, छर्दिं च प्रतिघनतः, स्नेहांश्चातिचरतः, ब्रयो दोषाः युगपत्  
प्रकोपमापद्यन्ते; त्वगादयश्चत्वारःशैथिल्यमापद्यन्ते; तेष शिथिलेष दोषाः प्रकुपिताः स्थानमधिगम्य  
सन्तिष्ठमानास्तानेव त्वगादीन् दूषयन्तः कुष्ठान्यभिनिर्वत्यन्ति॥६॥

tatrēdāṁ sarvakuṣṭhanidānāṁ samāsēnōpadēkṣyāmaḥ-  
śītōṣṇavyatyāsamanānupūrvyōpasēvamānasyatathā  
santarpañāpatarpañābhyaवahāryavyatyāsaṁ,  
madhuphāṇitamatasyalakucamūlakakākamācīḥsatataṁatimātramaṁjīrṇē ca samaśnataḥ,  
cilicimāṁ ca payasā, hāyanakayavakacīnakōddālakakōradūṣaprāyāṇi  
cānnānikṣīradadhitakrakōlakulatthamāśatasīkusumbhasnēhavanti, ētairēvātimātram  
suhitasya cavyavāyavyāyāmasantāpānatyupasēvamānasya,  
bhayaśramasantāpōpahatasya ca sahasāśītōdakamavatarataḥ, vidagdham  
cāhārajātamanullikhya vidāhīnyabhyavaharataḥ, chardīm capratighnataḥ,  
snēhāṁscāticarataḥ, trayō dōṣāḥ yugapat prakōpamāpadyantē;  
tvagādayaścatvārahśaithilyamāpadyantē; tēṣu śithilēṣu dōṣāḥ prakupitāḥ  
sthānamadhibhaya santiṣṭhamānāstānēva tvagādīndūṣayantaḥ  
kuṣṭhānyabhinirvartayanti॥६॥

tatredaMsarvakuShThanidAnaMsamAsenopadekShyAmaH-  
shItoShNavyatyAsamanAnupUrvyopasevamAnasyatathA  
santarpaNApatarpaNAbhyaवahAryavyatyAsaM, madhuphANitamatasyalakucamUlakakAk  
amAclH satataṁatimAtramaṁjIрNecasamashnataH, cilicimaMcapayasA,  
hAyanakayavakacInakoddAlakakoradUShaprAyANicAnnAnikShIradadhitakrakolakulatth  
amAShAtasIkusumbhasnēhavanti,  
etairevAtimAtraMsuhitasyacavyavAyavyAyAmasantApAnatyupasevamAnasya,  
bhayashramasantApopahatasyacasahasAshItodakamavatarataH,  
vidagdhaMcAhArajAtamanullikhyavidAhInyabhyavaharataH, chardiMcpratighnataH,  
snehAMshcAticarataH, trayodoShAHyugapatprakopamApadyante;  
tvagAdayashcatvAraHshaithilyamApadyante;  
teShushithileShudoShAHprakupitAHsthAnamadhibhaya santiShThamAnAstAnevavtagA  
dIndUShayantaHkuShThanyabhinirvartayanti॥६॥

The common etiological factors for all types of kushtha are briefly described below:

- Continuous exposure to sudden interchange use of cold and hot without following gradual change rule (exposure to sudden change in temperature),
- Sudden interchange/ alternate consumption of nourishing and depleting diets (change is diet qualities);
- Continuous and excessive intake of following articles
  - *Madhu* (honey ), *phanita* (pendium), *matsya* (fish), *lakucha* (*Artocarpus lakooch Roxb*), *mulaka* (radish) and *kakamach* (*Solanum nigrum Linn*);
- Continuous over-eating
- Eating while in state of indigestion

- Eating *Chilichima* (a type of fish) along with milk;
- Intake of foods mostly consisting of cereals like *hayanaka*, *yavaka*(barley), *chinaka*, *uddalaka*, *koradusha* (*Paspalums corbiculatum Linn.*) along with *kshira* (milk), *dadhi*(curd), *takra*( butter milk), *kola* (Indian jujube, *zyziphus jujube Lam*), *kulattha* (*Dulicus biflorus Linn*), *masha* (Black gram,*Phaseolus radiates Linn*), *atasi* (linseed, *Linunusit atissimum Linn*), *kusumbha*(*Carthamus tinctorius Linn* ) and unctuous articles.
- Excessive indulgence in sexual intercourse, physical exercise and exposure to heat after consuming the above mentioned food to one's over-satisfaction.
- A person suffering from fear, exhaustion or grief suddenly enters into the cold water (cold water bath).
- Without vomiting (expelling) out undigested food, if a person consumes food which causes burning sensation(*vidahi*),
- suppression of vomiting urge,
- indulges in excessive oleation,

Above causative factors lead to simultaneous aggravation of all the *tridosha*, weakness in the skin etc. four *dushyas*. Aggravated *doshas* lodge themselves in these weakened factors and after localization, further vitiate them and manifest kushtha. [6]

### Premonitory signs of kushtha

तेषामिमानि पूर्वरूपाणि भवन्ति; तदयथा- अस्वेदनमतिस्वेदनं पारुष्यमतिश्लक्षणता वैवर्ण्यं कण्डर्निस्तोदः सृप्तता परिदाहः परिहर्षो लोमहर्षः खरत्वमष्मायणं गौरवं शयथर्वसर्पागमनमभीक्षणं च कार्येकायच्छिद्रेष्पदेहः पक्वदग्धदष्टभग्नक्षतोपस्खलितेष्वतिमात्रं वेदना स्वल्पानामपि च व्रणानां दुष्टिरसंरोहणं चैति॥७॥

tēṣāmimāni pūrvarūpāṇi bhavanti; tadyathā- asvēdanamatisvēdanam  
pāruṣyamatiślakṣnatā vaivarnyamkandūrnistōdah suptatā paridāhah parihaarśo  
lōmaharṣah kharatvamūṣmāyaṇam gauravaṁśvayathurviśarpāgamanamabhīkṣṇam ca  
kāyē kāyacchidrēṣūpadēhahpakkvadagdhadaṣṭabhnagnakṣatopaskhalitēṣvatimātram  
vēdanā svalpānāmapi ca vranānāmduṣṭirasaṁrōhaṇam cēti॥७॥

teShAmimAnipUrvarUpANibhavanti; tadyathA-  
asvedanamatisvedanaMpAruShyamatishlakShNatAvaivarNyaMkaNDUrnistodaHsuptat  
AparidAhaHpariharSholomaharShaHkharatvamUShmAyaNaMgauravaMshvay  
athurviśarpAgamanamabhīkShNaMcakAyekAyacchidreShUpadehaHpakkvadagdhadaSh  
TabhnagnakShatopaskhaliteShvatimAtraMvedanAsvalpAnAmapicavraNAnAMduShT  
irasaMrohaNaMceti॥७॥

The clinical manifestations of skin diseases are preceded by or associated with loss or excessive sweating (at the site of localization of vitiates *doshas*), excess rough or excess smooth skin, discoloration, itching, pricking sensation, numbness, severe burning sensation, tingling sensation, goose bumps, xerosis on palpation, hot flashes, heaviness, swelling, if there is tenderness it indicates the possibility of suppurated,

burnt, bitten, broken, injured and dislocated parts and even smaller ulcers become chronic, non healing.[7]

### *Specific features of kapala kushtha*

ततोऽनन्तरं कष्ठान्यभिनिर्वर्तन्ते, तेषामिदं वेदनावर्णसंस्थानप्रभावनामविशेषविज्ञानं भवति; तद्यथा-  
रुक्षारुणपरुषाणि विषमविसृतानि खरपर्यन्तानि तनून्युद्वृत्तबहिस्तनुनि सुप्तवत्सुप्तानि  
हृषितलोमाचितानि निस्तोदबहुलान्यल्पकण्डूदाहपूयलसीकान्याशुगतिसमुत्थानान्याशुभेदीनि  
जन्तुमन्ति कृष्णारुणकपालवर्णानि च कपालकुष्ठानीति विद्यात्(१);

tatō'nantaram kuṣṭhānyabhinirvartantē, tēśāmidam  
vēdanāvarṇasāṁsthānaprabhāvanāmaviśēśavijñānambhavati; tadyathā-  
rūkṣāruṇaparuşānī viśamavisṛtāni kharaparyantāni tanūnyudvṛttabahistanūni  
[1]suptavatsuptāni [2]  
hr̥ṣitalōmācitāninistōdabahulānyalpakaṇḍūdāhapūyalasīkānyāśugatisamutthānānyāśub  
hēdīni jantumantikr̥ṣṇāruṇakapālavarṇāni ca kapālakuṣṭhānīti vidyāt(1);

tato~anantaraMkuShThanyabhinirvartante,  
teShAmidaMvedanAvarNasaMsthAnaprabhAvanAmavisheShavij~jAnaM bhavati;  
tadyathA-  
rUkShAruNaparuShANiviShamavisRutAnikharaparyantAnitanUnyudvRuttabahistanUnis  
uptavatsuptAnihRuShitalomAcitAni  
nistodabahulAnyalpakaNDUdAhapUyalasIkAnyAshugatisamutthAnAnyAshubhedIni  
jantumantikRuShNAruNakapAlavarNAnicakapAlakuShThanItividyAt(1);

Thereafter (above pathogenesis), kushtha is manifested. The specific diagnosis (of types) for nomenclature is based upon sensation, discoloration, site of lesion, effect of lesion.

*Kapala kushtha* has the following specific manifestations:

Dry, crimson red in color, coarse, unevenly spread, having rough edges, thin and slightly elevated periphery, severe numbness, covered with bristling hair, afflicted with extreme piercing pain, having mild itching, burning sensation, less serous and pus discharge, having acute manifestation and quick progression, are infested with maggots and appear like a black or blackish red piece of broken earthen pot.(1)

### *Audumbara kushtha*

ताम्राणि ताम्रखररोमराजीभिरवनदधानिबहलानि बहबहलपूयरक्तलसीकानि  
कण्डुक्लेदकोथदाहपाकवन्त्याशुगतिसमुत्थानभेदीनै ससन्तापक्रिमीणि  
पक्वौदुम्बरफलवर्णान्यौदुम्बरकुष्ठानीति विद्यात् (२);

tāmrāṇi tāmrakhararōmarājībhiravanaddhānibahalāni bahubahalapūyaraktalasīkāni  
kaṇḍūklēdakōthadāhapākavantyāśugatisamutthānabhēdīnisasantāpakrimīṇi  
pakvōdumbaraphalavarṇānyaudumbarakuṣṭhānīti vidyāt(2);

tAmrANitAmrakhararomarAjlahiravanaddhAnibahalAnibahubahalapUyaraktalasIkAnika  
NDUkledakothadAhapAkavantyAshugatisamutthAnabhedInisasantApaKrimi  
NipkvodumbaraphalavarNAnyaudumbarakuShThanItividytAt(2);

*Audumbara kushtha* has the following features:

The color of affected part of skin is coppery, covered with coppery-rough (thick) hair, have plenty of thick discharge of pus, blood and lymph accompanied with itching, moistened, sloughing, burning sensation and suppuration, having acute manifestation and quick progression, associated with rise in temperature and infested with maggots, appear like the ripe fruit of *Udumbara* (*Ficus racemosa* Linn) in color.(2)

*Mandala kushtha*

स्निग्धानि गुरुण्युत्सेधवन्तिश्लक्षणस्थिरपीतपर्यन्तानि शुक्लरक्तावभासानि शुक्लरोमराजीसन्तानानि बहुबहलशुक्लपिच्छलसाक्रीणि बहुक्लेदकण्डूक्रिमीणि सक्तगतिसमुत्थानभेदीनि परिमण्डलानि मण्डलकष्ठानिविद्यात्(3);

snigdhānigurūṇyutsēdhavanti ślakṣṇasthirapītāparyantāni [3] śuklaraktāvabhāsāni śuklarōmarājīsantānānibahubahalaśuklapicchilasrāvīṇi [4] bahuklēdakaṇḍūkrimīṇi saktagatisamutthānabhēdīni parimaṇḍalānimāṇḍalakuṣṭhāni vidyāt(3);

snigdhAnigurUNyutsedhavantishlakShNasthirapItparyantAnishuklaraktAvabhAsAnishuklaromarAjsantAnAnibahubahalaśuklapicchilasrAvINibahukledakaNDUKrimiNisaktagatisamutthAnabhedIniparimaNDalAnimaNDalakuShThanividytAt(3);

*Mandala kushtha* has following features:

Skin is unctuous, heavy, elevated with smooth, fixed and yellowish margins, white and reddish in appearance, filled with white hairlines associated with copious, thick, white and slimy discharge, excessive oozing and itching, infested with numerous maggots, lesions are slow to spread & progression, round in shape.(3)

*Rishyajihva kushtha*

परुषाण्यरुणवर्णानि बहिरन्तःश्यावानि  
नीलपीतताम्रावभासान्याशुगतिसमुत्थानान्यल्पकण्डूक्लेदक्रिमीणि दाहभेदनिस्तोद(पाक)बहुलानि श्वकोपहतोपमवेदनान्यत्सन्नमध्यानि तनुपर्यन्तानिकर्कशपिङ्काचितानि दीर्घपरिमण्डलान्यृष्यजिह्वाकृतीनि ऋष्यजिह्वानीति विद्यात्(4);

paruṣāṇyaruṇavaranāni  
bahirantahśyāvāninīlapītatāmrāvabhāsānyāśugatisamutthānānyalpakaṇḍūklēdakrimīṇi dāhabhēdanistōda(pāka)bahulāniśūkōpahatōpamavēdanānyutsannamadhyāni tanuparyantāni karkāśapiḍakācītānidīrghaparimaṇḍalānyṛṣyajihvākṛtīni ḫṣyajihvānīti vidyāt (4);

paruShANyaruNavarNAribhirantaHshyAvAninllapItatAmrAvabhAsAnyAshugatisamutthAnAnyalpakaNDUkledaKrimiNidAhabhedanistoda(pAka)bahulAnishUkopahatopam

avedanAnyutsannamadhyAnitanuparyantAnikarkashapiDakAcitAnidIrghaparimaNDalAn  
yRuShyajihvAkRutIniRuShyajihvAnltividylAt(4);

*Rishyajivha kushtha* has following features:

In this skin is rough, downy red, blackish in the center as well as in the periphery, have the appearance of shades of blue, yellow and coppery tinge associated with acute onset and spreading, with less itching, oozing and maggot infestation, having excessive burning sensation, ulceration, piercing pain (suppuration) as if pierced with bristles, with elevated center and thin margins; surrounded with rough papules and having large circumference and shape like that of the antelope (*rishyajihva*) tongue. (4);

*Pundarika kushtha*

शुक्लरक्तावभासानि रक्तपर्यन्तानि रक्तराजीसिरासन्ततान्युत्सेधवन्ति  
बहुबहलरक्तपयलसीकानिकण्डूक्रिमिदाहपाकवन्त्याशुगतिसमुत्थानभेदीनि पुण्डरीकपलाशसङ्काशानि  
पुण्डरीकाणीति विद्यात् (५);

śuklaraktāvabhāsāni raktaparyantāniraktarājīsirāsantatānyutsēdhavanti  
bahubahalaraktapūyalasīkānikaṇḍūkrimidāhapākavantyāśugatisamutthānabhēdīni  
puṇḍarīkapalāśasaṅkāśāni puṇḍarīkāṇīti vidyāt (5);

shuklaraktAvabhAsAniraktaparyantAniraktarAjsirAsantatAnyutsedhavantibahubahalara  
ktapUyalaslkAnikaNDUKrimidAhpAkavantyAshugatisamutthAnabhedlnipuNDarlkap  
alAshasa~gkAshAnipuNDarlkANltividylAt(5);

*Pundarika kushtha* has following features: In this type, the skin is white with reddish shade, with red margins covered with red lines and blood vessels, elevated, with copious thick blood, pus and serous discharge, associated with itching, maggots infestation, burning sensation and suppuration, and having acute manifestation and quick progression, appears like the petals of lotus(or *Butea monosperum* flower). (5);

*Sidhma kushtha*

परुषारुणानि विशीर्णबहिस्तनून्यन्तःस्निग्धानि  
शुक्लरक्तावभासानिबहन्यल्परेदनान्यल्पकण्डूदाहपयलसीकानि  
लघुसमुत्थानान्यल्पभेदैक्रिमीण्यलाबुपुष्पसङ्काशानि सिध्मकुष्ठानीति विद्यात् (६);

paruṣāruṇāni [5] viśīrṇabahistānūnyantaḥsnigdhanī  
śuklaraktāvabhāsānibahūnyalpavēdanānyalpakaṇḍūdāhapūyalasīkānilaghushamutthānā  
nyalpabhēdakrimīnyalābupuṣpasaṅkāśāni sidhmakuṣṭhānīti vidyāt (6);

paruShAruNAnivishIrNabahistanUnyantaHsnigdhAnishuklaraktAvabhAsAnibahUnyalpa  
vedanAnyalpakaNDUdAhpUyalaslkAnilaghushamutthAnAnyalpabhabedaKrimiNyalAbup  
uShpasa~gkAshAnisidhmakuShThanltividylAt (6);

*Sidhma kushtha* has following features:

In this type, skin is rough and downy red in color, with external margins fissured and thin, unctuous at the center, having white and red shades, numerous lesions, associated with mild pain, itching, burning sensation, purulent and serous discharge, having mild initiation and progression, and less maggots infestation, appear like flower of *alabu* (*Lagenaria siceraria* Standi (bottle gourd)) – are to be known as *sidhma kushtha*(6);

### *Kakanaka kushtha*

काकणन्तिकावर्णन्यादौ पश्चात् सर्वकृष्टलिङ्गसमन्वितानि पापीयसा  
सर्वकृष्टलिङ्गसम्भवेनानेकवर्णानि कौकणानीति विद्यात् तान्यसाध्यानि, साध्यानि पुनरितराणि॥८॥

kākaṇantikāvarṇanyādau paścāttu sarvakuṣṭhalīṅgasamanvitāni pāpīyasā [6]sarvakusṭhaliṅgasambhavēnānēkavarṇāni kākaṇānīti vidyāt| tānyasādhyāni, sādhyāni punaritarāṇī||8||

kAkaNantikAvarNAnyAdaupashcAttusarvakuShThali~ggaSAMANVITAnipAplyasA [6]  
sarvakuShThali~ggaSAMAHavenAnekavarNAnikAkaNAnItividyAt| tAnyasAdhyAni,  
sAdhyAnipunaritarANi||8||

*Kakanaka kushtha* has following features:

In this type, the skin is having color of *Ganja* (*Abrus precatorius*) seed in the beginning but later on associated with symptoms of all sinful kushtha subsequently having many colors. This is incurable, while others are curable. [8]

### Prognosis

तत्र यदसाध्यं तदसाध्यतां नातिवर्तते, साध्यं पुनः किञ्चित् साध्यतामतिवर्तते कदाचिदपचारात्।  
साध्यानि हि षट् काकणकवर्ज्यान्यचिकित्स्यमानान्यपचारतो वा  
दोषैरभिष्यन्दमानान्यसाध्यतामुपयान्ति॥९॥

tatra yadasādhyam tadasādhyatām nātivartatē, sādhyam punah kiñcit  
sādhyatāmativartatēkadācidapacārāt| sādhyāni hi ṣat  
kākaṇakavarjyānyacikitsyamānānyapacāratō  
vādōśairabhiṣyandamānānyasādhyatāmupayānti||9||

tatrayadasAdhyaMtadasAdhyatAMnAtivartate,  
sAdhyaMpunaHki~jcitsAdhyatAmativartatekadAcidapacArAt| sAdhyAni hi  
ShaTkAkaNakavarjyAnyacikitsyamAnAnyapacAratovAdoShairabhiShyandamAnAnyasA  
dhyatAmupayAnti||9||

The incurable disease never give up its incurability (never become curable). The curable disease may sometimes become incurable due to misconduct (not following the diet and lifestyle regulations properly). The six (types of) kushtha are curable except *kakanaka*. However if not treated properly, they may become incurable due to lack of timely management, improper management and constantly excess aggravation of *doshas*. [9]

## Complications of kushtha

साध्यानामपि हयपेक्ष्यमाणानां त्वङ्मांसशोणितलसीकाकोथकलेदसंस्वेदजा: क्रिमयोऽभिमूर्च्छन्ति; ते अक्षयन्तस्त्वगादैन् दोषाः पुनर्दूषयन्त इमानपद्रवान् पृथक् पृथगुत्पादयन्ति- तत्र वातः श्यावारुणवर्णपरुषतामपि च रौक्ष्यशूलशोषतांदवेपथ्यहृषसङ्कोचायासस्तम्भसप्तिभेदभङ्गान्, पित्तं दाहस्वेदकलेदकोथसावपाकरागान्, श्लेष्मा त्वस्य श्वैत्यशैत्यकण्डूस्थैर्यगौरवौत्सेधोपसन्जेहोपलेपान्, क्रिमयस्तु त्वगादीश्चतुरःसिराः स्नायूश्चास्थीन्यपि च तरुणान्याददते ||१०||

sādhyānāmapi hyupēkṣyamāñānāṁ  
tvañmāṁsaśōṇitalasīkākōthaklēdasar̄msvēdajāḥkrimayō'bhimūrcchanti; tē  
bhakṣayantastvagādīn dōśāḥ [1] punardūṣayanta imānupadravān  
pṛthakpṛththagutpādayanti- tatra vātaḥ śyāvāruṇavarṇāṁ paruṣatāmapi  
caraukṣyaśūlaśōṣatōdavēpathuharṣasaṅkōcāyāsastambhasuptibhēdabhaṅgān,  
pittamdāhasvēdaklēdakōthasrāvapākarāgān, śleṣmā  
tvasyaśvaityaśaityakaṇḍūsthairyagauravōtsēdhōpasnēhōpalēpān, krimayastu  
tvagādīmścaturaḥ sirāḥsnāyūścāsthīnyapi ca taruṇānyādadatē [2] ||10||

sAdhyAnAmapihyukeShyamANAnAMtva<sub>gmAMsashoNitalasikAkothakledasaMsvedajAHkrimayo</sub> abhimUrcch  
anti;  
tebhakShayantastvagAdIndoShAHpunardUShayantaimAnupadravAnpRuthakpRuthagut  
pAdayanti- tatravAtaHshyAvAruNavarNaMparuShatAmapica  
raukShyashUlashoShatodavepathuharShasa<sub>gkocAyAsastambhasuptibhedabha</sub> ggAn,  
pittaMdAhasvedakledakothasrAvapAkarAgAn,  
shleShmAtvasyashvaityashaityakaNDUsthairyagauravotsedhopasnehopalepAn,  
krimayastutvagAdIMshcaturaHsirAHsnAyUshcAsthInyapicataruNAnyAdadate ||10||

If the curable diseases are neglected (not treated), then they are also afflicted with putrefaction of skin, muscle tissue, blood, lymph and *swedaja krimi* (maggots or micro-organisms). The *krimi* get nourishment from the decayed skin etc. and further vitiate *doshas* leading to variety of complications corresponding to individual *doshas* as follows:

- Due to *vata*, blackish and downy red discolouration appears, roughness, dryness, piercing pain, emaciation (atrophy), pricking pain, tremors, horripilation, constriction, exhaustion, stiffness, numbness, ulceration and fissures;
- *Pitta* causes burning sensation, sweating, moistening, putrefaction, discharge, suppuration and redness;
- *Kapha* causes whiteness, coldness, itching, immobility, heaviness, protuberance, unctuousness and coating, maggots eat up the skin etc. (skin, flesh, blood, lymph) vessels, ligaments and cartilages. [10]

अस्यां चैवावस्थायामुपद्रवाः कृष्ठिनं स्पृशन्ति; तद्यथा- प्रस्वरणमङ्गभेदः पतनान्यङ्गावयवानां तृष्णाञ्जवरातीसारदाहदौर्बल्यारोचकविपाकाश्च, तथाविधमसाध्यं विद्यादिति||११||

asyāṁ caivāvasthāyāmupadrvāḥ kuṣṭhinaṁ spr̄šanti; tadyathā-  
prasravaṇamaṅgabhēdaḥpatanānyaṅgāvayavānāṁ  
त्रश्नाज्वरातीसारदाहदौर्बल्यारोचकविपाकाश्च, tathāvidhamasādhyamvidyāditi||11||

asyAMcaivAvasthAyAmupadrvAHkuShThinaMspRushanti; tadyathA-prasravaNama<sub>ggabhedahpatananya</sub>ggAvayavAnAMtRuShNAjvarAtlsAradAhadaurbalyArocakA vipAkAshca, tathAvidhamasAdhyaMvidyAditi||11||

During this stage, a patient of kushtha afflicts with complications such as- excessive discharge, ulceration of body parts, sequestration of body parts (necrosis of phallanges), thirst, fever, diarrhea, burning sensation, debility, anorexia, indigestion. Such types of kushtha should be known as incurable. [11]

## Summary

भवन्ति चात्र- साध्योऽयमिति यः पूर्वं नरो रोगमुपेक्षते। स किञ्चित्कालमासाद्य मृत एवावबुद्ध्यते॥१२॥

यस्तु प्रागेव रोगेभ्यो रोगेषु तरुणेषु वा। भेषजं कुरुते सम्यक् स चिरं सुखमश्नुते॥१३॥

यथा ह्यल्पेन यत्नेन छिद्यते तरुणस्तरुः। स एवातिप्रवृद्धस्तु छिद्यते तिप्रयत्नतः॥१४॥

एवमेव विकारोऽपि तरुणः साध्यते सुखम्। विवृद्धः साध्यते कृच्छादसाध्यो वाऽपि जायते॥१५॥

तत्र श्लोकः- सङ्ख्या द्रव्याणि दोषाश्च हेतवः पूर्वलक्षणम्। रूपाण्युपद्रवाश्चोक्ताः कुष्ठानां कौष्ठिके पृथक्॥१६॥

bhavanti cātra- sādhyo'yamiti yaḥ pūrvam̄ narō rōgamupēkṣatē| sa kiñcitkālamāsādya mṛta ēvāvabudhyatē||12||

yastu prāgēva rōgēbhyō rōgēṣu taruṇēṣu vā| bhēṣajam̄ kurutē samyak sa ciram̄ sukhamaśnutē||13||

yathā hyalpēna yatnēna chidyatē taruṇastaruḥ| sa ēvātipravṛddhastu chidyatē tiprayatnataḥ||14||

ēvamēva vikārō'pi taruṇaḥ sādhyatē sukham| vivṛddhaḥ sādhyatē kṛcchrādasādhyo vā'pi jāyatē||15||

tatra ślōkaḥ- saṅkhyā dravyāṇi dōṣāśca hētavah pūrvalakṣaṇam| rūpāṇyupadrvāścōktāḥ kuṣṭhānām kauṣṭhikē pṛthak||16||

bhavanticAtra- sAdhyo~ayamitiyaHpUrvamnarorogamupekShate| saki~jcitkAlamAsAdyamRutaevAvabudhyate||12||

yastuprAgevarogebyorogeShutaruNeShuvA| bheShajaMkurutesamyaksaciraMsukhamashnute||13||

yathAhyalpenayatnenachidyatetaruNastaruH| saevAtipravRuddhastuchidyate~atiprayatnataH||14||

evamevavikAro~apitaruNaHsAdhyatesukham| vivRuddhaHsAdhyatekRucchrAdasAdhyovA~apijjAyate||15||

tattrashlokaH- sa~gkhyAdravyANidoShAshcahetavaHpUrvalakShaNam| rUpANyupadrvAshcoktAHkuShThanAMkauShThikepRuthak||16||

The individual, who neglects the disease in early stage by assuming it as curable,( does not take treatment at early stage) can be regarded as dead after a lapse of time(due to complications). The individual who took treatment properly prior to full manifestation of disease or in its early stage attains happiness for long time. Just as a tender plant is easy to cut down with a little effort, but the same require great effort when fully grown.

Likewise, a disease is easily curable in the early stage; it becomes incurable or difficult to cure as it reaches the advanced stage.[12-15]

इत्यग्निवेशकृते तन्त्रे चरकप्रतिसंस्कृते निदानस्थाने कुष्ठनिदानं नाम पञ्चमोऽद्यायः॥५॥

ityagniveshakRutetantrecarakapratisaMskRutenidAnasthAnekuShThanidAnaMnAmapa,  
camo adhyAyaH||5||

Thus ends the fifth chapter on Kushtha Nidana in Nidana Sthana in the treatise composed by Agnivesha and as redacted by Charak.

## Tattva Vimarsha (Fundamental Principles)

- kushtha is the result of combined and simultaneous involvement of all the three *dosha* and subsequently vitiation of the four body constituents i.e. *rasa* (*twak*, or skin), *mamsa*(muscle tissue), *rakta*(blood), and *lasika*(lymph).
- There can be infinite clinical presentations of kushtha (skin diseases) depending upon severity of combination of above mentioned vitiating factors.
- While diagnosing the severity of kushtha, the depth of lesion can be assessed according to involvement of skin, muscle, blood and lymph respectively. The treatment should be planned accordingly, targeting these constituents and should be based upon predominantly vitiated *dosha*.
- The varieties in vitiated qualities of *doshas* (like *ruksha* etc.) depend upon dietary and lifestyle causative factors. kushtha can be classified based upon the criteria like specific sensation in skin, change in color of skin (pigmentation), site of lesion, spread of lesion, clinical features.
- Continuous exposure to change in temperature (thermal sensitivity), change in fluid volume and muscle mass inside body, incompatible dietary and lifestyle factors are main causative factors of kushtha. Similarly sudden changes in above factors may lead to acute condition of skin disease.
- If the curable kushtha are not timely treated, it leads to favorable environment to growth of micro-organisms. The micro-organisms grow on the vitiated *twak*, *rakta*, *mamsa*, and *lasika* leading to various severe skin lesions.
- The curable disease can become incurable due to improper management, exposure to causative factors and aggravation of *dosha*.

## Vidhi Vimarsha (Applied Inferences)

Three chapters are devoted to dermatological disorders, present chapter and Chikitsa Sthana chapter 7 (Kushtha Chikitsa) and 21(Visarpa Chikitsa). The present chapter deals with seven types of kushtha, while in Kushtha Chikitsa, all eighteen types have

been described and have been given the name of *Mahakushtha* (major) and *Kshudra kushtha* (Minor). After reviewing the symptoms of seven major types it is clear that it covers a progressive disorder of skin leading to loss of organs and impaired sensation (sensory neuropathy). According to some commentators *Kshudra kushtha* is a group of mild and localized skin diseases, which runs a chronic course.

Most of the diseases are classified on the basis of *dosha* predominance. There is variable interplay of three *dosha* and four *dushya* in kushtha, which can present as seven types, eighteen types and innumerable types on the basis of symptoms, color, location, prognosis and treatment. (see chart).

kushtha and *visarpa* - both the diseases have the same seven causative factors (three *dosha* and four *dhatu* type disorders), where kushtha is chronic and *visarpa* is acute and may be life threatening, In *visarpa*, *rakta* is dominant which makes it spread rapidly, treatment is bloodletting. In case of kushtha all seven factors are involved with little bit variation.

## Causes of kushtha

Diet and lifestyle play a significant role in health and disease. What, how and when diet should be taken is important. In kushtha, alternating opposite character of food like hot/cold, nourishing/ non nourishing foods if taken one after the other is an etiological factor. Many other such etiological factors have been listed. All the etiological factors mentioned, also help in the growth of parasites like maggots at the involved skin.

Environmental factors like diet and lifestyle, in the presence of genetic predisposition impair the immune system with increased susceptibility to secondary infection.

*Viruddhahara* (incompatible foods) has similar effect through epigenetic mechanism. Early diagnosis is important and stages have been described for disease manifestation. *Poorvarupa* (prodromal symptoms) occur in the fourth stage of disease manifestation and if the disease is diagnosed at this level, early control and better treatment may be possible. Though in the stage of *poorvarupa* it may not be possible to diagnose the type/subtype of disease, however type of *dosha* can be decided and accordingly treatment can be started. (7)

## Classification of kushtha

The *mahakushtha* has been classified under seven types as per their *dosha* predominance accordingly symptomatology of these has been described. All the body physiology and pathology is designated to a particular *dosha* thus the diseases are basically diagnosed on the basis of three *dosha* and their combinations. The color, texture, secretions, margins, and types of pain associated with these lesions, as well as their progression have been classified on the basis of three *dosha*.

## Layers of skin

Charak and Sushruta both have enumerated the layers of skin and the thickness of layers and diseases occurring in these layers have also been narrated. Their possible modern equivalence as given by some scholars in Ayurvedic texts is as follows:

| Sl. No<br>in vrihi* –<br>size of<br>rice/<br>barley<br>Seed | Layers<br>Probable<br>equivalen<br>ce | Thickness<br>Layer | Modern<br>comparab<br>le<br>equivale<br>nce**     | Skin      | Reflection<br>of disease                                      |
|---|---------------------------------------|--------------------|---|-----------|---|
| 1   | Avabhasi<br>ni                        | 1/18               | stratum<br>corneum                                | Epidermis | sidhma,<br>padmini,<br>kantaka                                |
| 2   | Lohita                                | 1/16               | Stratum<br>lucidum                                |           | tilakalaka,<br>vyanga,<br>nyachha                             |
| 3   | Shweta                                | 1/12               | Stratum<br>granulosu<br>m                         |           | charmada<br>la,<br>ajagallika,<br>mashaka                     |
| 4   | Tamra                                 | 1/8                | squamous<br>cell layer<br>and basal<br>cell layer |           | kilasa,<br>kushtha  |
| 5   | Vedini                                | 1/5                | upper<br>dermis                                   | Dermis    | kushtha,<br>visarpa   |
| 6   | Rohini                                | 01                 | lower<br>dermis                                   |           | granthi,<br>apachi,<br>arbuda,<br>sleepada,<br>galagand<br>a. |
| 7   | Mamsadh<br>ara                        | 02                 | Subcutan<br>eous<br>tissue<br>including<br>fat    |           | bhaganda<br>ra,<br>vidradhi,<br>arsha                         |

| Sl. No | Layers | Thickness | Modern comparable equivalence** | Skin | Reflection of disease |
|--------|--------|-----------|---------------------------------|------|-----------------------|
|--------|--------|-----------|---------------------------------|------|-----------------------|

Note: \*1 vrihi measurement = 0.5 to 1.5 mm \*\*we have correlated the relative terms in modern dermatology that are selected by considering the origin of the disease and thickness of layer explained in Ayurveda.

### Dosha specific variation in kushtha

Various Vedic texts on the subject have tried to classify all signs and symptoms on the basis of *tridosha* thus this serves a good tool to diagnose the lesions as per three *doshas* seen in the following table:

| Sr | Parikshya bhava( assessment parameter) | vata   | pitta  | kapha                                     |
|----|--|--|--|---|
| 1  | Observation (darshan parikshya bhava)  |  |  |   |
|    | Color                                  | Black, Dusky or Downy red, Blackness             | Red, Yellowish-ne ss                                       | White                                     |
|    | Texture                                | Dry, constriction                                | Smooth   | Oily or soft                              |
|    | Presence of hairs                      | Covered with bristling hair                      | Coppery-rou gh hairs                                       | White hairlines in                        |
|    | Margins of lesion                      | Unevenly spread, rough margins                   | Thin   | Elevated with smooth and fixed margins    |
|    | Secretions                             | Less serous & pus discharge, absence of sweating | Plenty of thick discharge of pus, blood and lymph, profuse | Copious, thick, white and slimy discharge |

| Parikshya<br>bhava(<br>assessment<br>parameter) |                                       | vata  | pitta  | kapha                    |
|---|---------------------------------------|---|--|--------------------------|
| 2   | Presence of maggots (Krimi, jantu)    | Jantu   | Krimi  | Krimi                    |
|   | Palpation(sp arshana parikshya bhava) |   |  |                          |
|   | Type of lesion                        | Macular   | Macular, blisters  | Macular, Papular lesion  |
|   | Consistency of lesions                | Rough, Hard, emaciation   | Smooth,  | Soft, thickness, oedema, |
|   | Sensitivity –                         | numbness, hypersensitivity  | -  | -                        |
|   | Temperature -                         | cold to touch,  | hot to touch   | cold to touch,           |
| 3   | Interrogation (prashna pariksha)      |   |  |                          |
|   | vedana (pain),                        | Pain, Breaking pain, pricking pain, horripilation, loss of sensation or excessive sensitivity | Itching, burning sensation, feeling of burning, foul smell | Itching, heaviness,      |
|   | Onset                                 | Acute   | Acute  | Chronic                  |
|   | Progression                           | Quick   | Quick  | Slow                     |

Thus on the basis of symptomatology of it can be inferred that maha-kushtha is a group of skin diseases that includes Leprosy. However, there is ample scope to include, diagnose and treat any other syndromes available today or occurring in future on the basis of this description of kushtha.(verse 8)

### Prognosis of kushtha

Prognostic criteria for curability or incurability has been given much importance. Text cautions that incurable will not leave its nature, however curable conditions can become incurable due improper treatment. With the availability of newer treatments and better diagnostic tools many syndromes which, were listed as incurable have become palliable. The management of leprosy is one example of change in the approach to management with the help of antibiotics, but, with limitations. The outcome of treatment can be significantly changed if the current antibiotic treatment is supplemented with Ayurvedic management.

After the fifth stage of the therapeutic intervention i.e. rupa (proper manifestation) if the disease is not managed properly or the intervention is ineffective the disease progresses further and produces symptoms of upadrava (complications). These symptoms and signs have again been classified on the basis of tri-dosha. As the rasa(twak), rakta, mamsa and lasika ( lymphatic tissue) are involved in the manifestation of kushtha, its progression to the deeper tissues like meda, asthi, majja and shukra will lead to complications. This includes permanent disfigurement of organs, loss of phalanges and infection of wounds by maggots causing severe damage to the tissues like bones. (verse 10-16)

If the symptomatology described by Charak and Dhatugata symptoms of Sushruta are compared, it is evident that the symptoms described for rasa dhatu represent poorvarupa. Rakta and mamsagata symptoms are listed as rupa of kushtha. The symptoms listed as medagata are the disfigurement of the organs, falling of limbs and flaring of skin lesions. The symptoms listed as asthigata kushtha are saddle nose, kerato- conjunctivitis, growth of maggots in lesions and loss of speech. This list of dhatugata kushtha described by Sushruta covers almost all the complications of leprosy. Thus taking into the consideration of Dhatugata stage of the disease further insight in the management of the disease as Sushruta has advised to increase the intensity of the treatment taking into the consideration of the dhatu involved.

Sushruta has explained the symptomatology on the basis of dhatugata stage of the dosha.[Sushruta Samhita Nidana 7/21-26] Rasa, lasika, rakta and mamsa are dushya, in this disease hence complications arise when the dosha proceed to the deeper dhatu, meda and majja.

Samswedaja Krimi (Maggot/micro-organisms infestation with sweating) is a complication is to be kept in mind for treatment purpose. This has been stressed that treatment should be done at the earliest stage otherwise even the most curable disease becomes incurable. Leprosy can be referred in seven types of Kushtha. Vivid description of the disease is available in the texts and almost all the aspects of

pathogenesis is detailed including its contagiousness. The serious complications like disfigurement of limbs and loss of phalanges has also been described.

## Research works on kushtha

| Name of author<br>and title of<br>thesis   | Year | Subject      | Institute                                |
|--|------|--------------|--|
| Sharma R. K. -<br>A study of<br>Leprosy<br>according to<br>Ayurveda and<br>its management<br>with M. G.<br>Capsule. L-1118   | 1982 | Kayachikitsa | I.P.G.T.& R.A.,<br>Jamnagar              |
| Singh B P - A<br>conceptual,<br>clinical and<br>experimental<br>study of leprosy<br>with its<br>treatment by<br>some<br>indigenous<br>drugs.                                       | 1973 | Kayachikitsa | Faculty of<br>Ayurveda BHU,<br>Vaaranasi |
| Awadhwal V K -<br>Studies on<br>treatment of<br>leprosy with<br>some<br>indigenous<br>compounds  | 1986 | Kayachikitsa | Faculty of<br>Ayurveda BHU,<br>Varanasi  |
| Rane S B – To<br>prepare<br>Gandhaka Druti<br>and study of the<br>effect of an<br>Ayurvedic<br>preparation<br>Gandhaka Druti<br>on leprosy and<br>lepromatous<br>leprosy patients. | 1997 | Ph.D. theses | University of<br>Pune, Pune              |

| Name of author<br>and title of<br>thesis   | Year | Subject                           | Institute                                     |
|--|------|-----------------------------------|---|
| Chavan<br>Santosh – To<br>study the<br>Dhatu-Gatavast<br>ha of<br>Maha-Kushtha<br>(leprosy) w.s.r.<br>to skin biopsy.    | 2004 | Roga Vigyana &<br>Vikriti Vijnana | Tiak Ayurved<br>Mahavidyalaya,<br>Pune        |
| Eswar Reddy M<br>- Effect of<br>Pancha Karma<br>Chikitsa and<br>Gandhaka<br>Rasayana in the<br>management of<br>leprosy. | 1988 | Kayachikitsa                      | Mysore  |
| Bora Dilip - To<br>study<br>Vedini-Tvacha<br>in Sushruta<br>w.s.r. to leprosy.   |      | ShareeraRacha<br>na               | Ashtanga<br>Ayurved<br>Mahavidyalaya,<br>Pune |

## Related Chapters

- Kushtha Chikitsa, Skin diseases in Integrative Medicine

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## Shosha Nidana

### Nidana Sthana Chapter 6. Diagnosis and etiopathogenesis of Progressive wasting disease Abstract

This chapter describes the basics of etiopathogenesis of progressive wasting disease termed as shosha roga and its culmination in rajayakshma vis-à-vis pulmonary tuberculosis. Shosha is characterized by severe depletion of tissues (also called phthisis) which could be a precursor of tuberculosis as known today which occurs due to tubercular infection, phthisis and immune-compromised state. Over exertion (sahasa), suppression of natural urges (vegavidharana), pre-existing emaciation (kshaya), and wrong dietary habits (vishamashana) are the four primary causes of shosha. These four basic factors lead to progressive loss of strength (including immunity), vitiating the three doshas and culminating in rajayakshma, a major organic disease that seems to be similar to various similar progressively wasting diseases presenting characteristically with signs and symptoms of Pulmonary Tuberculosis as seen today and has been described in great clinical and therapeutic detail in Rajayakshma Chikitsa .

**Keywords:** *kshaya, shosha, yakshma, sahasa, visamashana, Nidanarthakara Roga Vyadhiksamatva, Ojakshaya*, chronic wasting diseases, Immune defense, *Rasayana*, exertion, improper dietary habits, suppression of natural urges, depletion of tissue.

## Introduction

There are three interrelated entities mentioned by Charak in three distinct chapters within Charak Samhita: Shosha Nidana [Cha.Sa.Nidana Sthana.6], *rajayakshma* [Cha.Sa.Chikitsa Sthana 8) and *kshataksheena* [Cha.Sa.Chikitsa Sthana 11).

*Shosha* is the preparatory stage of gradual, generalized emaciation due to four distinct causative factors mentioned earlier which, if untreated or ignored, may lead to *rajayakshma*. One of the contributing factors of *shosha* is indicative of systemic depletion of *dhatu* occurring due to divergent causes. An important point to note here is that *shosha* is different from *kshataksheena*, a post-treatment stage of localized or generalized emaciation needing further intensive treatment.

Another commonly used term for *shosha* is *kshaya* (emaciation). However, it is imperative to clarify here that while *shosha* and *kshaya* are contextually similar and synonymous to *yakshma* , the specific meaning in Charak Samhita is different for all the three stages of the disease. Ayurveda is not very stringent when it comes to discerning cause-effect. Cause and effect are largely considered a continuum. While discussing the issue of cause-effect relationship between *kshaya-shosha-yakshma*, the concept of *nidanarthakara roga* has also to be kept in mind where one known disease or a morbid state can play as the *nidana* of another disease. That is why, *kshaya* is sometimes mentioned as cause of *shosha* too. The word *kshaya* in this particular context refers to

pre-existing *kshaya*. *Kshaya* is of two distinct types - *anuloma kshaya* and *pratiloma kshaya*. *Anulomakshaya* is caused by the initial depletion of the *ojas rasa* situated in the heart, while *pratiloma kshaya* occurs due to an excessive indulgence in sexual activities leading to the depletion of *shukra dhatu* which in turn leads to generalized *vata vridhhi* and *vata* induces *shoshana* of *dhatu*s. Both these variants contribute to *shoshana* (qualitative and quantitative depletion of *sharira dhatu*s or body tissues).

*Shosha* and *kshaya* can be considered as independent clinical entities warranting independent strategies for diagnosis and treatment. Either of these may prove to be a *nidanarthakara* factor for the occurrence of *rajayakshma* (i.e., if *shosha* or *kshaya* are left untreated, could lead to *rajayakshma*). *Shosha* is essentially a state of intractable emaciation, cachexia or consumption that could be equated to phthisis. It could be considered to be an intermediate state that may not necessarily exhibit any evidence of tubercular infection but because of persistent *dhatu kshaya*(depletion of tissues) it could be logically associated with an immunocompromised state. Some patients may catch infections that may manifest into a febrile state with probable bacteriological invasion warranting appropriate treatment on the lines of *rajayakshma*. Because *shosha* and *kshaya* are intermediary states that are more of diagnostic significance than of significance from a core treatment perspective. Charak wrote the chapter on *shosha* in Nidana Sthana , while on *rajayakshma* in Chikitsa Sthana with the same motive.

It may appear that *shosha* and *rajayakshma* are synonymous because in this chapter there are brief descriptions of *poorvarupa* (preliminary signs) and *ekadasha rupa* (advanced stage) of *yakshma*. However, the manifestation of *rajayakshma* has been described in detail only in the Chikitsa Sthana.

While the focus of this chapter is to delineate the views of Charak, Sushruta in his text differs in his views on the relationship between *shosha* and *yakshma*. While Charak considers them as dependent entities as mentioned above, Susruta considers *shosha* distinctly different disease that could manifest itself in any of seven different variants caused by seven different causative factors (*vyavaya* or excessive sexual indulgence, *shoka* or sorrow, *jara* or rapid aging process, *vyayama* or excessive exercise, *adhwagaman* or excessive travelling, *vrana* or wound/trauma, and *urakshata* or chest injury.

## Sanskrit text, Transliteration and English Translation

अथातःशोषनिदानंव्याख्यास्यामः||१||

इतिहसमाहभगवानात्रेयः||२||

AthÁtah ÐoÓanidÁnam vyÁkhyÁsyÁmah ||1||

iti ha smÁha bhagavÁnÁtreyah ||2||

Now we shall expound the chapter “*Shosha Nidana*” (Diagnosis and etiopathogenesis of Progressive wasting disease). Thus said Lord Atreya. [1-2]

## Four Causes of shosha

इहखलुचत्वारिशोषस्यायतनानिभवन्ति।  
तद्यथा- साहसंसन्धारणंक्षयोविषमाशनमिति॥३॥

Ih khalu catvÁri DoÒasyÁyatanÁni bhavanti  
tadyathÁ- sÁhasam sa ñ dhÁranam kÒayo viÒamÁÐanamiti ||3||

There are four causes of *shosha*: overexertion, suppression of urges, wasting, and irregular consumption of improper food articles [3].

Each of these causes will be explained here in detail:

### 1. Overexertion

तत्रसाहसंशोषस्यायतनमितियदुक्तं तदनुव्याख्यास्यामः-

यदापुरुषोदुर्बलोहिसन्बलवतासहविगृहणाति, अतिमहतावाधनुषाव्यायच्छति, जल्पतिवाऽप्यतिमात्रम्, अतिमात्रं वाभारमुद्वहति, अप्सुवाप्लवतेचातिदूरम्, उत्सादनपदाघातनेवाऽतिप्रगाढमासेवते, अतिप्रकृष्टवाऽद्वानद्रुतमभिपतति, अभिहन्यतवा, अन्यद्वाकिञ्चिदेवं विषममतिमात्राव्यायामजातमारभते, तस्यातिमात्रेण कर्मणोरः क्षण्यते।

तस्योरः क्षतमुपप्लवतेवायुः।

सतत्रावस्थितः श्लेष्माणमुरः स्थमुपसङ्गृहयपितं च दूषयन्विहरत्यूर्ध्वमधस्तिर्यक्च।  
तस्ययोऽशः शरीरसन्धीनाविशतितेनास्यजृम्भाऽङ्गमर्देज्वरश्चोपजायते,  
यस्त्वामाशयमध्यपैतितेन रोगाभवन्ति उरस्याअरोचकश्चयः कण्ठमभिप्रपद्यते कण्ठस्तेनोद्धवं स्यते स्वर  
श्चावसीदति, यः प्राणवहानि सोतां स्यन्वेति तेन श्वासः प्रतिश्यायश्च जायते,  
यः शिरस्य वतिष्ठते शिरस्तेनोपहन्यते।

ततः क्षणनाच्यैवोरसोविषमगतित्वाच्यवायोः कण्ठस्य चोद्धवं सनात्कासः सततमस्य सञ्जायते,  
सकासप्रसङ्गादुरसिक्षतेशोणितं ष्ठीवति, शोणितागमनाच्चास्यदौर्बल्यमुपजायते;  
एवमेतेसाहसप्रभवाः साहसिकमुपद्रवाः स्पृशन्ति।

ततः सउपशोषणैरतैरुपद्रवैरुपद्रुतः शनैः शनैरुपशुष्यति।

तस्मात्पुरुषो मतिमान्बलमात्मनः समीक्ष्य तदनुरूपाणिकर्माण्यारभेतकर्तुं।  
बलसमाधानं हिंशरीरं, शरीरमूलश्च पुरुषङ्गति॥४॥

भवतिचात्र-

साहसंवर्जयेत्कर्मरक्षजीवितमात्मनः।

जीवन्हिपुरुषस्त्वष्टं कर्मणः फलमश्नुते॥५॥

Tatra sÁhasam DoÒasyÁyatanamiti yaduktam tadanu vyÁkhyÁsyÁmah -

yadÁ puruÒo durbalo hi san balavatÁ saha vigruhnÁti, atimahatÁ vÁ dhanuÒÁ vyÁyacachati,jalpativÁ~apyatimÁtram, atimÁtramvÁ bhÁramudvahati, apsuvÁ plavateca atidÚram, utsÁdanapadÁghÁtane vÁ~atipragÁ±hamÁsevate, atiprakruÒOamvÁ~adhvÁnamdrutamabhipatati,abhihanyatevÁ, anyadvÁ kijcidevamvidhamviÒamam atimÁtramvÁ vyÁyÁmajÁtamÁrabhate, tasyÁtimÁtreÆakarmaÆorahkÒanyate|tasyorahkÒatamupaplavatevÁyuh |

Sa tatrvasthitah ÐleÒmÁÆeam urahsthamupasagruhya pittam ca dÚÒayan viharaty Úrdhvamadhastiryak Ca |

tasya yomaÐah ÐarírasandhínÁviÐati tenÁsyā jªambhÁ angamardo jvaraÐcopajÁyate, yastvÁmÁÐayamabhyupaiti tena rogÁ bhavanti urasyÁ arocakaÐca yah kaÆÔhamabhiprapadyate kaÆÔhastenoddhvamsyate svaraÐcavasÍdati, yah prÁÆavahÁni srotÁmsyanveti tena ÐvÁsaḥ pratíÐyÁyashca jÁyate, yah ÐirasyavatiÒÔhate Ðirastenopahanyate|

tatah kÒaÆana ca caiv uraso viÒamagatitvÁcca vÁyoh kaÆÔhasya coddhvamsanÁt kÁsaḥ satatamasya sa¿jÁyate, sakÁsaprasa¿gÁdurasi kÒhate ÐoÆitam ÒaÔhívati, ÐoÆitatÁgamanÁt ca asya dauºbalyamupajÁyate|

evamete sÁhasaprabhavÁh sÁhasikamupadravÁh spºuÐanti |

tatah sa upaÐoÒaÆairetairÚpadravairÚpadrutah Ðanaih ÐanairupaÐuÒyati |

tasmÁt purÚÒo matimÁn balamÁtmanah samÍkÒya tadanurÚpÁÆi karmÁÆeyÁrabheta kartu¿|

balasamÁdhÁnam hi Ðaríram, ÐaríramÚlaÐca purÚÒa iti ||4||

Bhavati cÁtra-

sÁhasam varjayet karma rakÒatjÍvitamÁtmanah|

jívan hi purÚÒastviÒÔam karmaÆah phalamaÐnute ||5||

When a weak person fights against a strong one, or exercises with an excessively large (or weighty) bow (weapon), or speaks too much, or physically carries a lot of weight, or swims across a long distance in water, or is habitually subjected to forceful massage including kneading with feet, or sprints over a long distance, or is assaulted, or practices various complicated or excessive physical exercises, his lungs are “traumatized” due to excessive exertion. This aggravates *vayu* in the lung region, taking along *kapha* residing in the lungs while also affecting *pitta*, causing the vitiated *doshas* to spread upwards, downwards and obliquely. A portion of this afflicted *dosha* system that gets into body joints causes yawning, body ache, and fever. That which gets into the *amashaya* causes diseases of lungs and anorexia. That which gets into the throat causes irritation of the throat and hoarseness of voice. That which gets into the channels carrying vital breath (bronchial channels) causes dyspnea and coryza. And that which gets into the head produces distress in the head. Thus, due to wound in lungs, irregular movement of *vayu* causes a variety of diseases depending upon the organs it gets into. The lungs get

damaged further, triggering conditions such as hemoptysis and consequently weakening the patient. This verse, therefore, advises the reader to engage in laborious activities appropriate to his strength and not overexert himself. [4-5]

## *2. Suppression of natural urges*

सन्धारणं शोषस्यायतनमितियदुक्तं तदनुव्याख्यास्यामः-

यदापुरुषोराजसमीपेभर्तुः समीपेवागुरोर्वापादमूलेद्यूतसभमन्यंवासतांसमाजंस्त्रीमध्यंवासमनुप्रविश्ययनैर्वाऽ

प्युच्चावैरभियानभयात्प्रसङ्गादधीमत्वादधृणित्वादवानिरुणदृयागतान्वातमूत्रपुरीषवेगान्तदातस्यसन्धारणादवायुः प्रकोपमापदयते, सप्रकृपितः पितृश्लेष्माणौ समदीर्योर्ध्वमध्यस्तिर्यक्चौविहरति; ततश्चांशविशेषणपूर्ववच्छरीरावयवविशेषं प्रविश्यश्लभूलमपजनयति, भिनतिपुरीषमुच्छोषयतिवा, पाश्वेचातिरुजति, अंसाववमृद्गाति, कण्ठमरश्चावधमति, शिरश्चोपहन्ति, कासंश्वासंज्वरं स्वरभेदं प्रतिश्यायं चोपजनयते।

ततः स उपशोषणैरतैरुपद्रवैरुपद्रुतः शनैः शनैरुपशब्द्यति।

तस्मात्पुरुषोमतिमानात्मनः शारीरेष्वेवयोगक्षेमकरेषु प्रयत्नेतविशेषेण; शरीरं हृदयस्य मूलं, शरीरमलश्च पुरुषोभवति ॥६॥

भवतिचात्र-

सर्वमन्यत्परित्यज्यशरीरमनुपालयेत्।

तदभावेहिभावानांसर्वभावःशरीरिणाम् ॥७॥

sa; dhÁranam ÐoÒasyÁyatanamiti yaduktam tadanuvyÁkhyÁsyÁmah -

yadÁ purÚÒo rÁjasamípe bhartuh samípe vÁ gurorvÁ pÁdamÚle dyÚtasabhamanyam  
 vÁ satÁm samÁjam strímadhyam vÁ samanupraviÐya yÁnairvÁ apyuccÁvacairabhiyÁn  
 bhayÁt prasa¿gÁddhrímattvÁddhºuÆitvÁdvÁ nirÚÆaddhyÁgatÁn  
 vÁtamÚtrapurÍÖavegÁn tadÁ tasya sa¿dhÁranÁdvÁyuh prakopamÁpadyate, sa  
 prakupitah pittaÐleÒmÁÆau samudíryordhvamadhastiryaka ca viharati|

tataጀcĀጀ Daviጀeጀea pÚrvavaccharíጀvayavaviጀeጀam praviጀya  
 ጀÚlamupajanayati, bhinatti puríጀamucchoጀayati vĀ, párጀve cÁtirujati,  
 aጀsÁvavamጀudgÁti, kaጀÔhamuraጀcÁvadhamati, shiraጀcopahanti, kÁsam ጀvÁsam  
 jvaram svarabhedam pratiጀyÁyam copajanayati; tatah sa  
 upaጀoጀaጀairetairÚpadravairÚpadrutah ጀanaih ጀanairÚpaጀuጀyati |

tasmÁt purÚÒo matimÁnÁtmanah ÐÁrÍreÒevea yogakÒemakareÒu prayateta  
viÐeÒeÆa; ÐÁrÍram hyasya mÚlam, ÐÁrÍramÚlaÐca purÚÒo bhavati ||6||

bhavati cĀtra-

sarvamanyat parityajya ḍÁríramanupÁlayet |

tadabhÁve hi bhÁvÁnÁm saryÁbhÁvah ÐÁrÍriÆÁm ||7||

When a person suppresses the urge to pass flatulence, urination, and bowel movement due to various reasons such as attending a royalty, being in a formal setting (in the company of sages, teachers, nobles, etc), being in the midst of women, society of gambling, or while traveling on uneven vehicle, or due to fear, environment, bashfulness or disgust, *vayu* gets vitiated due to suppression of urges. This vitiated *vayu* aggravates *pitta* and/or *kapha*, spreading upwards, downwards or obliquely depending upon the combination of afflicted *doshas*. As said earlier, when a portion gets into specific body parts, it causes pain, diarrhea or drying up of feces, excessive pain in sides of the chest, pain in the shoulders, irritation in throat and lungs, headache, cough, dyspnea, fever, hoarseness of voice and coryza. Thereafter, having been afflicted with these wasting complications, the patient gradually gets afflicted with *shosha*. Hence the wise should carefully observe the ways that promote and protect the body.

Here is the verse: Setting all other things aside, one should protect the body, because in its absence there will be complete absence of all the bodily entities. [6-7]

### *3. Depletion of tissues*

क्षयःशोषस्यायतनमितियदुक्तं तदनुव्याख्यास्यामः-

यदापुरुषोऽतिमात्रं शोकचिन्तापरिगतहृदयोभवति, ईर्ष्योत्कण्ठाभयक्रोधादिभिर्वासमाविश्यते,  
कृशोवासन्कृक्षान्नपानसेवीभवति, दुर्बलप्रकृतिरनाहारोऽल्पाहारोवाभवति,  
तदातस्यहृदयस्थायीरसःक्षयमुपैति; सतस्योपक्षयाच्छोषप्राप्नोति, अप्रतीकाराच्चानुबृद्ध्यतेयक्षमणा |  
यथोपदेक्ष्यमाणरूपेण।८।

k०ayah ऽोयस्यायतनमिति yaduktam tadanuv्याख्यास्याम-

yadÁpurÚ०oatimÁtram ऽokacintÁparigatah<sup>a</sup>dayo bhavati,  
ÍrOyatkaÆÔhÁbhaya krodhÁdibhirvÁ samÁviÐyate, k<sup>a</sup>uDo vÁ san rÚk०ÁnnapÁnaseví  
bhavati, durbalaprak<sup>a</sup>utiranÁhÁro alpÁhÁro vÁ bhavati, tadÁ tasya h<sup>a</sup>idayasthÁyí rasah  
k०ayamupaiti; sa tasyopak०ayÁccho०am prÁpnoti, apratíkárÁccÁnubadhyate  
yak०omaÆÁ |

yathopadek०yamÁÆearÚpeÆa |8|

Now explained is depletion of tissues as the cause of *shosha*. When a person is suffering excessively from anxiety and grief, or from emotions like envy, fear, anger, etc., and if the person is also afflicted with a wasting disorder and/or using rough food and drinks, or if a congenitally weak person is subjected to fasting or malnutrition, his *ojas* gets diminished leading to *shosha*. Due to want of proper management and care, he could get afflicted with the disease having symptoms to be described later. [8]

#### *3a. Excessive sexual indulgence\**

यदावापुरुषोऽतिर्हर्षादतिप्रसक्तभावःस्त्रीष्वतिप्रसङ्गमारभते, तस्यातिमात्रप्रसङ्गाद्रेतःक्षयमेति।

क्षयमपिचोपगच्छतिरेतसियदिमनःस्त्रीभ्योनैवास्यनिवर्तते,  
तस्यचातिप्रणीतसङ्कल्पस्यमैथुनमापद्यमानस्यनशुक्रं प्रवर्तते०तिमात्रोपक्षीणरेतस्त्वात्,

तथाऽस्यवायुव्यायच्छमानशरीरस्यैवधमनीरनुप्रविश्यशोणितवाहिनीस्ताभ्यःशोणितंप्रच्यावयति,  
तच्छुक्रक्षयादस्यपुनःशुक्रमार्गेणशोणितंप्रवर्ततेवातानुसृतलिङ्गम्।

अथास्यशक्रक्षयाच्छोणितप्रवर्तनाच्चसन्धयःशिथिलीभवन्ति, रौक्ष्यमुपजायते,  
भूयःशरीरदौर्बल्यमाविशतिवायुःप्रकोपमापदयते;  
संप्रकुपितोवशिकंशरीरमनुसर्पन्नुदीर्यश्लेष्मपित्तेपरिशोषयतिमांसशोणिते,  
प्रच्यावयतिश्लेष्मपित्तेसंरुजतिपांश्वे, अवमृद्गात्यंसौकण्ठमृदैवंसति,  
शिरःश्लेष्माणमपत्क्लेश्यप्रतिपूर्यतिश्लेष्मणा, सन्धीश्चप्रपौडयन्करोत्यङ्गमर्दमरोचकाविपाकौच,  
पित्तश्लेष्मोत्क्लेशात्प्रतिलोमगत्वाच्चवायुज्वरंकासंश्वासंस्वरभेदंप्रतिश्यायंचोपजनयति;सकासप्रसङ्गादुर  
सिक्षतेशोणितंठीवति,शोणितगमनाच्चास्यदौर्बल्यमपजायते,  
ततःसउपशोषणैरेतैरुपद्रवैरुपद्रुतःशनैःशनैरुपशुष्यति तस्मात्पुरुषोमतिमानात्मनः।

शरीरमनुरक्षञ्छुक्रमनुरक्षेत् पराहयेषाफलनिर्वृत्तिराहारस्येति॥८॥

भवतिचात्र-

आहारस्यपरंधामशुक्रंतद्रक्ष्यमात्मनः।

क्षयोह्यस्यबहून्नोगान्मरणंवानियच्छति॥९॥

yadÁ vÁ purÚÒoatiharÒÁdatiprasaktabhÁvah stríÒvatiprasa¿gamÁrabhate,  
tasyÁtimÁtraprasa¿gÁdretah kÒayameti |

kÒayamapi copagacchati retasi yadi manah stríbhyo naivÁsyā nivartate, tasya  
cÁtipraÆítasa¿kalpasya maithunamÁpadyamÁnasya na Ðukram  
pravartateatimÁtropakÒÍÆaretastvÁt, tathÁ asya vÁyurvyÁyacchamÁnaÐárasyaiva  
dhamaníranupraviÐya ÐoÆitavÁhinÍstÁbhyah ÐoÆitam pracayÁvayati,  
tacchukrakÒayÁdasya punah ÐukramÁrgeÆea ÐoÆitam pravartate vÁtÁnusªutali¿gam  
|

athÁsyā ÐukrakÒayÁcchoÆitapravartanÁcca sandhayah ÐithillÍbhavanti,  
raukÒyamupajÁyate, bhÚyah ÐarÍram daurbalyamÁviÐati vÁyuh prakopamÁpadyate;  
saprakupito vaÐikam ÐarÍramanusarpannudírya ÐleÒmapitte pariÐoÒayati  
mÁ¿saÐoÆite, pracayÁvayati ÐleÒmapitte sa¿rujati pÁrÐve, avamªudgÁtya¿sau  
kaÆÔhamuddhva¿sati, Ðirah ÐleÒmÁÆeamupatkleÐya pratipÚrayati ÐleÒmÁÆea,  
sandhí¿Ðca prapÍ±ayan karotya¿gamardamarocakÁvipÁkau ca, pittaÐleÒmotkleÐÁt  
pratilomagatvÁcca vÁyurjvaram kÁsam ÐvÁsam svarabhedam pratiÐyÁyam  
copajanayati; sa kÁsaprasa¿gÁdurasi kÒate ÐoÆitam ÒÔhÍvati,  
ÐoÆitagamanÁccÁsyā daurbalyamupajÁyate, tatah sa  
upaÐoÓaÆairetairupadravairupadrutah Ðanaih ÐanairupaÐuÒyati |tasmÁt purÚÒo  
matimÁnÁtmanah ÐarÍramanurakÒat ÐukramanurakÒet |

parÁ hyeÐÁ phalanirvªuttirÁhÁrasyeti ||8||

bhavati cÁtra-

ÁhÁrasya param dhÁma Ðukram tadrakÒyamÁtmanah |

kÒayo hyasya bahÚn rogÁnmaraÆam vÁ niyacchati ||9||

When a person indulges in excessive sexual intercourse habitually, his semen gets diminished. In spite of diminished semen, if he obsesses about sex mentally as well as physically and continues to engage in sexual acts with excessively determined passion, his semen is not discharged because of its already diminished state causing *vayu* to enter his blood vessels and blood getting discharged from the seminal passage. Now, due to loss of semen and hemorrhage, his joints loosen, the skin loses its suppleness and becomes rough or scaly, body weakens further and *vayu* gets vitiated. The vitiated *vayu* spreads in the body deficient of semen and blood, aggravating *kapha* and *pitta* and drying up the muscles and blood. Further, the vitiated *vayu* expels *kapha* and *pitta*, causing pain in the sides of the chest and shoulders, irritation of throat, aggravating *kapha* of the head and replacing it with the vitiated *kapha* expelled from their natural locations, causing pain in joints, body ache, anorexia and indigestion. Due to frequent cough the lungs get damaged and hemoptysis ensues, debilitating the patient further and afflicting him with wasting complications. If untreated, the patient gradually is afflicted with phthisis.

Here is the verse: Semen is the final essence of one's food hence it should be protected because its depletion leads to many diseases or even death. [8-9]

- \* This is not mentioned as a main cause of *shosha* in verse 3, but is a derivation of verses 8-9.

#### *4. Irregular meals/Improper meals*

विषमाशनं शोषस्यायतनमितियदुक्तं, तदनुव्याख्यास्यामः-

यदापुरुषः पानाशनभक्ष्यलेह्योपयोगान्प्रकृतिकरणसंयोगराशिदेशकालोपयोगसंस्थोपशयविषमानासेवते, तदातस्यतेभ्योवातपितश्लेष्माणोवैषम्यमापदयन्ते; तेविषमा: शरीरमनसृत्ययदासोतसामयनमखानिप्रतिवार्यावतिष्ठन्तेतदाजन्तर्यदयदाहारजातमाहरतितत दस्यमूत्रपुरीषमेवोपजायतेभूयिष्ठनान्यस्तथाशरीरधातुः; सपरीषोपष्टम्भाद्वर्तयेति, तस्माच्छुष्यतोविशेषणपुरीषमनुरक्ष्यन्तथाऽन्येषामतिकृशदुर्बलानां; तस्यानाप्यायमानस्यविषमाशनोपचितादोषाः पृथक्पृथगुपदवैर्युञ्जन्तोभूयः शरीरमुपशोषयन्ति।

तत्रवातः शूलमङ्गमर्दकण्ठोदध्वंसनंपाश्वसंरुजनमंसावमर्दस्वरभेदं प्रतिश्यायं चोपजनयति; पितंज्वरमतीसारमन्तर्दाहं च; श्लेष्मातुप्रतिश्यायं शिरसोगुरुत्वमरोचकं कासंच, सकासप्रसङ्गादुरसिक्षतेशोणितनिष्ठीवति, शोणितगमनोच्चास्यदौर्बल्यमुपजायते।

एवमेतेविषमाशनोपचितास्त्रयोदोषाराजयक्ष्याणमभिनिर्वर्तयन्ति।

सतैरुपशोषणैरुपद्रवैरुपद्रुतः शनैः शनैः शुष्यति।

तस्मात्पुरुषोमतिमान्प्रकृतिकरणसंयोगराशिदेशकालोपयोगसंस्थोपशयादविषममाहारमाहरेत्॥१०॥

भवतिचात्र-

हिताशीस्यान्मिताशीस्यात्कालभोजीजितेन्द्रियः।

पश्यन्नोगान्बहून्कष्टान्बुद्धिमान्विषमाशनात्॥११॥

viÒamÁÐanam ÐoÒasyÁyatanamiti yaduktam tadanuvyÁkhyÁsyÁmah –

yadÁ purÚÒah

pÁnÁÐanabhakÒalehyopayogÁn, prak<sup>a</sup>tikaraÆasa¿yogarÁÐideÐakÁlopayogasa¿sthop  
aÐayaviÒamÁnÁsevate, tadÁ tasya tebhyo vÁtapittaÐleÒmaÆo  
vaiÒamyamÁpadyante; te viÒamÁh ÐarÍramanus<sup>a</sup>utya yadÁ srotasÁmayanamukhÁni  
prativÁryÁvatiÒÔhante tadÁ janturyadyadÁrajÁtamÁharati tattadasya  
mÚtrapuríÒamevopajÁyate bhÚyiÒÔham nÁnyastathÁ ÐarÍraadhÁtuh; sa  
purÍÒopaÒtambhÁdvartayati, tasmÁcchuÒyato viÐeÒeÆa purÍÒamanurakÒyam tathÁ  
anyeÒÁmatik<sup>a</sup>uÐadurbalÁnÁm; tasyÁnÁpyÁyamÁnasya viÒamÁÐanopacitÁ doÒÁh  
p<sup>a</sup>uthak p<sup>a</sup>uthagupadravairyu¿janto bhÚyah ÐarÍramupaÐoÒayanti|

tatra vÁtah ÐÚlama¿gamardam kaÆÔhoddhvaw¿sanam

pÁrÐvasa¿rujanama¿sÁvamardam svarabhedam pratiÐyÁyam copajanayati; pittam  
jvaramatísÁramantardÁham ca; ÐleÒommÁ tu pratiÐyÁyam Ðiraso gurtvamarocakam  
kÁsam ca, sa kÁsaprasa¿gÁdurasi kÒate ÐoÆitam niÒÔhívati, ÐoÆitagamanÁccÁsya  
daurbalyamupajÁyate|

evamete viÒamÁÐanopacitÁstrayo doÒÁ rÁjayakÒyÁÆamabhinirvartayanti |

sa tairupaÐoÒaÆairupadravairupadrutah Ðanaih Ðanaih ÐuÒyatil|

tasmÁt purÚÒo matimÁn

prak<sup>a</sup>tikaraÆasa¿yogarÁÐideÐakÁlopayogasa¿sthopaÐayaviÒamamÁhÁramÁharet  
||10||

bhavati cÁtra-

hitÁÐí syÁnmitÁÐí syÁtkÁlabhojÍ jitendriyah |

paÐyan rogÁn bahÚn kaÒtÁn buddhimÁn viÒamÁÐanÁt ||11||

This verse talks of irregular diet as a cause of *shosha*. When a person takes food – drinkable, eatable, chewable and lickable – irregularly in terms of nature, preparation, combination, quantity, place, time, and various dietary rules (do's and don'ts) appropriate for his constitution, his *doshas* get imbalanced. These imbalanced *doshas* spread in the body, obstructing the openings of various channels and the flow of *dhatus*. In such cases, the body survives on the support of *malas*. Hence *mala* should be protected, particularly in case where the patient has already been afflicted with phthisis and in cases where the individual is emaciated or very weak. The vitiated 'vata causes pain, body ache, irritation of throat, chest pain, pain in shoulders, hoarseness of voice and coryza. Vitiated pitta causes fever, diarrhea, internal heat and vitiated kapha causes coryza, heaviness of head, anorexia and cough. Due to frequent bouts of cough, lungs get damaged and hemoptysis ensues, consequently debilitating the patient further and causing shosha". Having been afflicted with these wasting complications, the patient gradually becomes very weak and gaunt.

The final verse advises thus: Observing many troublesome diseases caused by irregular dieting, the wise should eat wholesome, measured and timely food with self-restraint. [10-11]

एतैश्चतुर्भिः शोषस्यायतनैरुपसेवितैर्वीतपितश्लेष्माणः प्रकोपमापद्यन्ते।

तेप्रकुपितानानाविधैरुपद्रवैः शरीरमुपशोषयन्ति।

तंसर्वरोगाणांकष्टतमत्वाद्राजयक्षमाणमाचक्षतेभिषजः;

यस्माद् वापूर्वमासीदभगवतः सोमस्योदुराजस्यतस्माद्राजयक्षमेति॥१२॥

Etaï Ðca caturbhi ÐoÒasyÁyatanairÚpasevitairvÁtapittaÐleÒmÁÆah  
prakopamÁpadyante|

Te prakupitÁ nÁnÁvidhairÚpadravaih ÐarÍramupaÐoÒayanti |

tam sarvarogÁÆám kaÐtatamatvÁdrÁjayakÒmÁÆamÁcakÒate bhiÐajah; yasmÁdvÁ  
pÚrvamÁsÍdbhagavatahsomasyo±urÁjasya tasmÁdrÁjayakÒmeti ||12||

Regular use of the four etiological factors of *shosha* vitiates the *doshas*. These vitiated *doshas* dry up the body while afflicting it with various complications. Physicians call it *rajayakshma* because it is most troublesome among all the diseases (*rajayakshma* would literally translate to the “king of *yakshmas*”) or because in *vedic* mythologies, it afflicted Lord Moon, the king of stars. [12]

### Prodromal symptoms

तस्येमानिपूर्वरूपाणिभवन्ति; तद्यथा- प्रतिश्यायः, क्षवथुरभीक्षणं, श्लेष्मप्रसेकः, मुखमाधुर्यम्,  
अनन्नाभिलोषः, अन्नकालेचायासः,  
दोषदर्शनमदोषेष्वल्पदोषेषुवाभावेषुपात्रोदकान्नसूपापूपोपदंशपरिवेशकेषु, भक्तवतश्चास्यहल्लासः,  
तथोल्लेखनमप्याहारस्यान्तरान्तरा, मुखस्यपादयोश्चशोफःपाण्योश्चावैक्षण्मत्यर्थम्,  
अक्षणोःश्वेतावभासताचातिमात्रं, बाह्वौश्चप्रमाणजिजासा, स्त्रीकामता, निर्घृणितवं,  
बीभत्सदर्शनताचास्यकाये,  
स्वप्नेचाभीक्षणं दर्शनमनुदकानामुदकस्थानानांशून्यानांचग्रामनगरनिगमजनपदानांशुष्कदग्धभग्नानांचव  
नानांकूकलासमयूरवानरशुक्सर्पकाकोलकादिभिः  
संस्पर्शनमधिरोहणं यानंवाश्वोष्ट्रखरवराहैः केशास्थिभस्मतुषाङ्गारराशीनांचाधिरोहणमिति  
(शोषपूर्वरूपाणिभवन्ति)||१३||

tasyemÁni pÚrvarÚpÁÆi bhavanti; tadyathÁ- pratiÐyÁyah, kÒavathurabhIkÒÆam,  
ÐleÒmaprasekah, mukhamÁdhuryam, anannÁbhilÁÒah, annakÁle cÁyÁsah,  
doÐadarÐanamadoÐeÐvalpadoÐeÐou vÁ bhÁveÐou  
pÁtrodakÁnnasÚpÁpÚpopadaÐapariveÐakeÐou, bhuktavataÐcÁsya hªullÁsah,  
tathollekhanamapyÁhÁrasyÁntarÁntarÁ, mukhasya pÁdayoÐca Ðophah  
pÁÆyoÐcÁvekÐaÆamatyartham, akÐÆoh ÐvetÁvabhÁsatÁ cÁtimÁtram, bÁhvoÐca  
pramÁÆajijúÁsÁ, stríkÁmatÁ, nirghªuÆitvam, blbhatsadarÐanatÁ cÁsya kÁye, svapne  
cÁbhIkÒÆam darÐanamanudakÁnÁmudakasthÁnÁm ÐÚnyÁnÁm ca  
grÁmanagaranigamajanapadÁnÁm ÐuÐkadagdhabhagnÁnÁm ca vanÁnÁm

k<sup>a</sup>ukalÁsamayÚravÁnaraÐukasarpakÁkolÚkÁdibhih sa<sub>2</sub>sparÐanamadhirohaÆam  
yÁnam vÁ ÐvoÒtrakharavarÁhaih keÐÁsthibhasmatuÒÁa<sub>2</sub>gÁrarÁshínÁm  
cÁdhirohaÆamiti (ÐoÒapÚrvarÚpÁÆi bhavanti) ||13||

*Shosha's* prodromal symptoms include coryza, frequent sneezing, excessive secretion of mucus, a sweet aftertaste in the mouth, aversion to food, exhaustion during meal time, finding fault with utensils, water, cereals, pulses flour preparations, spicy preparation and caterers who are free from fault or have a little fault. A person afflicted with *shosha* will experience nausea after meals, intermittent vomiting during meals, swellings in the face and feet, tendency of frequently looking at the hands, excessive whitishness in the eyes, curiosity about measurement of arms, longing for women, disgust, loathsome view of his body, frequent dreams of waterless/arid places as well as places such as deserted villages, cities, districts and regions, of forests dried, burnt and destroyed. Such a person would often be using vehicles drawn by, or coming in contact with, or riding animals like chameleon, peacock, monkey, parrot, serpent, crow, owl, dog, camel, ass and boar, and riding over heaps of hair, bones, ash, chaff and charcoal. [13]

### Eleven symptoms

अतऊर्ध्वमेकादशरूपाणितस्यभवन्ति; तद्यथा- शिरसःपरिपूर्णत्वं, कासः, श्वासः, स्वरभेदः,  
श्लेष्मणश्छर्दनं, शोणितष्ठीवनं, पार्श्वसंरोजनम्, अंसावर्मदः, ज्वरः, अतीसारः, अरोचकश्चेति॥१४॥

Ata ÚrdhvamekÁdaÐarÚpÁÆi tasya bhavanti; tadyathÁ- Ðirasah paripÚrÆatvam,  
kÁsah, ÐvÁsah, svarabhedah, ÐleÒmÁÆaÐchardanam, ÐoÆitaÒÔhívanam,  
pÁrÐvasa<sub>2</sub>rojanam, a<sub>2</sub>sÁvamardah, jvarah, atísÁrah, arocakaÐceti ||14||

There are eleven typical symptoms of *shosha* (mentioned in this verse) such as fullness of head, cough, dyspnea, hoarseness of voice, vomiting of sputum, hemoptysis, chest-pain, pain in shoulders, fever, diarrhea, and anorexia. [14]

### Prognosis of disease

तत्रापरिक्षीणबलमांसशोणितोबलवानजातारिष्टःसर्वरपिशोषलिङ्गैरुपद्रुतःसाध्योज्ञेयः।  
बलवानुपचितोहिसहत्वादद्व्याध्यौषधबलस्यकामसुबहुलिङ्गोऽप्यल्पलिङ्गएवमन्तव्यः॥१५॥

Tatra parikÒÍÆabalama<sub>2</sub>saÐoÆito balavÁnajÁtÁriÒtah sarvairapi  
ÐoÒali<sub>2</sub>gairÚpadrutah sÁdhyo jÆayah | balavÁnupacito hi  
sahatvÁdvyÁdhyauÒadhabalasya kÁmam subahuli<sub>2</sub>goapyalpali<sub>2</sub>ga eva mantavyah  
||15||

One having all the above symptoms of *shosha* should be considered curable in case his strength, muscles and blood are not wasted, he is strong and the fatal signs have not appeared. The strong and well-nourished, because of tolerance to intensity of disease and drugs, should be assumed to have fewer symptoms even if they have many, and treated accordingly. [15]

दुर्बलं त्वतिक्षीणबलमांसशोणितमल्पलिङ्गमजातारिष्टमपि बहुलिङ्गं जातारिष्टं च विद्यात्,  
अंसहत्वाद्व्याध्यौषधबलस्य; तं परिवर्जयेत्, क्षणोनैव हिप्रादुर्भवन्त्यरिष्टानि,  
अनिमित्तश्चारिष्टप्रादुर्भावइति॥१६॥

Durbalam tvatikOÍÆabalama ñsaDoÆitamalpali ñgamajÁtÁriÓtamapi bahuli ñgam  
jÁtÁriÓtam ca vidyÁt, asahatvÁdhyauÓadhabalasya; tam parivarjayet,  
kÒaÆenaiva hi prÁdurbhavantyariÓtÁni, animittaÐcÁriÓtaprÁdurbhÁva iti ||16||

On the contrary, the patient who is weak and has excessively diminished strength, muscles and blood should be taken as having numerous symptoms including the fatal ones, even if he has few symptoms and no fatal signs because of his intolerance to the intensity of disease and drugs. Hence he should be discarded (for treatment) because the fatal signs appear in a moment and without any apparent cause.[16]

## Summary

तत्रश्लोकः- समुत्थानं चलिङ्गं चयः शोषस्यावबुद्ध्यते। पूर्वरूपं च तत्त्वेन सराजः कर्तुमर्हति॥१७॥

tatra ÐlokaH- samutthÁnam ca li ñgam ca yah ÐoÒasyÁvabudhyate| pÚrvvarÚpam ca  
tattvena sa rÁjÆah kartumarhati ||17||

Now the (summing up) verse –

He is capable of treating the king who knows, in essence, the etiology, symptoms and prodroma of *shosha*.

Thus, ends the sixth chapter on diagnosis of *shosha* in Nidana Sthana in the treatise composed by Agnivesha and redacted by Charak. [16-17]

## Tattva Vimarsha (Fundamental Principles)

- Wasting or emaciating conditions like *shosha* occur because of four factors: *Sahasa* (overexertion), *Sandhaarana* (suppression of natural urges), *Kshaya* (emaciation), and *Vishamasana* (Dietary error).
- The common effect of the four factors is *dhatu kshaya* (loss of body tissue), especially *rasa* which is responsible for maintaining *vyadhikshamatya* (Immunity).
- *Sahajabala* (Innate immunity) is fundamental to prognosis of the disease. If *sahajabala* is intact, the outcome of treatment is favorable, even if the symptoms are full blown.
- Etiological factors, *dosha* vitiation and clinical features help in understanding the pathophysiology of the disease.

## Vidhi Vimarsha (Applied Inferences)

The point of significance in this chapter is the identification of the intermediary clinical state called *shosha* which is the precursor to *rajayakshma*, a pathological state warranting early diagnosis and treatment as a promotive health care strategy. Sushruta acknowledges the specific role of microbial infection through direct physical contacts as

the real cause, while Charak emphasizes upon the role of pre-existing progressive weakness and emaciation accompanied with lowered *vyadhikshamatva* (poor immune strength) as some of the key causative factors responsible for the entire spectrum of the disease complex that includes *shosha*, *kshaya*, and *rajayakshma*. This fundamental idea for which Charak devotes one full chapter in Nidana Sthana is an original contribution of Charak, drawing specific attention to the fact that the host factor and host resistance against disease is more important than the causative microbial organism in case of contagious diseases like tuberculosis. It also endorses the Ayurvedic stand that the solution lies in enhancing or strengthening the immunity of the host and not merely in tackling the microorganisms afflicting the person. Use of antibiotics, as is prevalent in western medicine, is now dwindling because of their adverse side effects and rapidly emerging problems associated with drug resistance. In fact, there is now a growing consensus that an idea of an antibiotic war in medicine is anti-life and anti-health.

The recent advances in biomedical sciences unfolding the shape and role of genome, epigenome and microbiome in human health have partly proven the generic fact that our genes, our environment and “friendly” microbes are our collective friends and are an integral part of our being. They are protective tool for the immune-enhancing through positive life style, healthy dietetics and regulated use of *rasayana* remedies. *Rasayanas* are described in Ayurveda for promotive and preventive health care as well as for promotion of longevity.

Recent researches on *rasayana* drugs such as *amalaki* and *ashwagandha* have appeared in certain high impact journals. Lakhota et al, in their 2012 study on drosophila model, have recorded marked DNA repairing effects besides better maturation rate and healthier and longer life span in fruit flies treated with *amalaki rasayana*. Similarly, Kuboyama et al (2005) have reported that withanolide-A, isolated from the *ashwagandha rasayana*, has significant regenerative effect on neurons. Singh et al (2008) reported neuro-nutrient impact of Ayurvedic *rasayana* therapy while Jayprakash et al (2013) reported the neuroprotective role of *ashwagandha* in experimentally induced Parkinsonism. In view of the conceptual strength and the recent scientific studies now it could be suggested that *rasayanas* like *amalaki*, *chyavanprasha* and *ashwagandha* should be used in the management of *shosha*, *kshaya* and *yakshma* with great advantage, besides administration of other therapeutics described in Ayurvedic texts.

As mentioned earlier, Ayurvedic texts propound the doctrine of an immunocompromised state as the precursor of chronic wasting diseases like *shosha*, *kshaya* and *yakshma*. Sushruta, while describing the *samkramaka* (contagious diseases) specially, observes that *jwara*, *shosha*, *rajayakshma*, *abhisyanda* or conjunctivitis, and *kushtha* (or dermatoses such as leprosy) spread from person to person by contact. The spread of such diseases may be prevented by avoiding personal contacts and by promoting *vyadhiksamatva* or immunity with the help of leading a healthy lifestyle, following good nutrition and through administration of *rasayana* therapy.

## *Ojas* (vital essence of the body)

The Ayurvedic classics describe a unique hitherto-less-known concept of *ojas* (vital essence of the body) that is responsible for biological strength (including immunity). *Ojas* is the final product of tissue nourishment and is quintessential to all the seven *dhatus* namely *rasa*, *rakta*, *mamsa*, *meda*, *asthi*, *majja*, and *shukra*. Sushruta describes *ojas* as the *param teja* of the *sapta dhatus* and as the *bala* or biological strength of an individual. *Ojas* is of two kinds, namely, *para ojas* and *apara ojas*. *Para ojas* is subtle and present in very minute quantities in the heart while *apara ojas* is gross and as much as half an *anjali* (handful) in quantity spread all over the body. *Para ojas* is vital to life and any damage or vitiation of it may lead to instant death. *Apara ojas* is responsible for gross immune strength.

The *oja-bala* (*ojas* strength) derived from *ojas* has been categorized to be of three kinds: *sahaja bala* or primary natural immunity, *kalaja bala* or acquired immunity through environmental factors such as climate etc., and *yuktikrit bala* or artificially-induced acquired immunity. The classics prompt to utilize these three resources to enhance the *bala/immunity* in order to prevent all ailments especially chronic wasting diseases and contagious diseases, such as *shosha*, *kshaya* and *yakshma*.

The texts describe three categories of *bala-dosha* or disorders of *bala* which are comparable to three categories of immune disorders such as :

1. *Oja-vyapat* (immune-aberrations and allergies),
2. *Oja-visransa* (dislodged immunity and autoimmune disorders), and
3. *Oja-kshaya* (immunodeficiency).

There are specific methods and approaches to tackle the three categories of immune disorders.

It cannot be overemphasized that while looking at the above mentioned ancient classical descriptions on *ojabala* and *bala-dosha* it seems immunology was already highly advanced in the *Samhita* period of Ayurveda and the knowledge in this field was almost comparable with the latest basic knowledge of immunology as known today.

## Ancient Ayurvedic leads in Microbiology

It will be pertinent to review the concept of microbiology and parasitology in Ayurvedic classics in the context of immunity and body resistance. *Ojas*, *bala* and *vyadhikshamatva* need to be adequate within the body for it to possess immunity. Though the role of microbes in pathology was not known in modern medicine 200 years ago, Ayurveda had a good knowledge of their role, albeit of a primitive nature. Ayurveda describes two kinds of organisms, namely *prakrita* (non-pathogenic) and *vaikrita* (pathogenic). Also described are two categories of pathogens/parasites, namely, external and internal. The internal organisms are mainly of three categories in terms of their natural environments: those that thrive on mucus (*shleshma*), those thriving in fecal matter, and those thriving in blood. Some of these, particularly the ones thriving in

fecal matter seem to be intestinal parasites while others simulate microbes. The texts repeatedly advocate protecting surgical wounds from these organisms. There is also a clear description of vector borne diseases and that diseases such as leprosy, tuberculosis, conjunctivitis and fever as contagious diseases spread by contact with other patients or vectors.

It is interesting to note that these ancient texts recognized the existence of “friendly” non-pathogenic organisms and their functions - something that is only now being considered the greatest discovery in microbiology .It is claimed by modern scientists that our living body is made up of 10 trillion somatic cells and is home to some 100 trillion friendly microbes. This “empire” of microbes is called Microbiome. Understanding the relationship between the microbiome and the human being, the animal and the environment - is as important as unravelling human genome. The microbiome is like a well structured organ with unique functions and hence needs to be protected in the same way as we protect our other vital organs like liver, heart or kidney. This recognition of the existence of these friendly *prakrita* (non-pathogenic organisms) by Ayurveda thousands of years ago is of great historical significance.

### Research Topics on this Subject

1. A literary and conceptual study to identify the nature and strength of Bala or immune strength of human body and its scope in prevention and treatment of various diseases and to evaluate its contemporary application.
2. Clinical and experimental studies on different *rasayana* remedies for their immunoenhancing effect in cases of *kshaya, shosha* and *yakshma*.
3. To develop precise diagnostic criteria for the three disease states described by Charak namely *kshaya, shosha* and *yakshma* including attempts to identify biomarkers, indicators and clinical rating scales to develop good diagnostic methodology to be used by Ayurvedic practitioners.

### Further reading

1. Charak Samhita Vimana 7.9 on natural non-pathogenic organisms.
2. Chakrapani on Charak Samhita Vimana 7.9. “*īarīra- sahajĀstvaikĀh*”
3. Charak Samhita Vimana 11.13 about the pathogenic organism that grow in blood, mucus and faeces.
4. Charak Samhita Vimana 7.11, Sushruta Uttara Tantra 54.19-20 and Vaghbata Nidana 14.51 stating that pathogens grown on blood are minute and are invisible.
5. Sushruta Samhita Nidana 5.33-34 on the mode of transmission of diseases from person to person.
6. Charak Samhita Nidana 3.6. Description on epidemics.
7. Lakhota and associates Amalaki Rasayan in Drosophila model
8. Kuboyama,T. etal (2005) Neuritic regeneration and synoptic reconstruction induced by Withanolide-A.British Jour.Pharmacol. 144/7:961-971

9. Singh,RH ; Narasimhamurthy,K and Singh,Girish (2008) Neuronutrient Impact of Ayurvedic Rasayana therapy in brain aging. Biogerontology 09:369-374.
- 10.Jay Prakash et al 2013 Neuroprotective role of Withania somnifera root extract in Moneb-parquat induced mouse model of Parkinsonism. Neurochem Res. Feb. 2013

### Related Chapters

- Rajayakshma Chikitsa
- Kshatakshina Chikitsa

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## Unmada Nidana

### Nidana Sthana Chapter 7. Diagnosis and etiopathogenesis of psychosis disorders Abstract

This chapter describes the detailed etiopathogenesis and types of a large class of major mental disorders or psychoses named as Unmada. The word Unmada, literally means frenzy, madness or mental derangement. Unmada is characterized by a disordered mental state in the faculties of mind and intellect. This leads to perverted presentation of thought processes, decision making, intellectual functioning, orientation and responsiveness, memory, desires, habits, character, psychomotor activity, conduct and behaviour. The clinical diagnosis of unmada, its etiology, psychopathogenesis, and prodromal features have been elaborately described in this chapter.

**Keywords:** *Unmada, Sanjna Jnana, Amarsha, himsa, Prajnaparadha, Psychosis, insanity, mental factors examination, perversion, impairment of decision making, intellectual functions.*

## Introduction

unmada, a major mental disorder, has been known to Ayurvedic practitioners since ancient times in India. In the Vedic period, the disease was thought to be caused due to *grahas* or demons, but in Ayurveda, it is considered a major mental illness. unmada as such does not describe a lone clinical entity comparable to a modern diagnostic category, rather it is a group of psychotic disorders. As the psychotic disorders cover almost all the major mental illnesses, the different types and subtypes of unmada can be separately correlated with different psychotic disorders. The clinical features of the different types of unmada resemble various types of schizophrenia, manic psychosis, psychotic depression, and depressive disorders.

Thus, unmada covers a wide range of major mental disorders and is considered synonymous with madness and mental derangement, in which a person loses contact with reality and loses the ability to regulate his actions & conduct according to the norms of the society. When *doshas* move upwards in the body into the head, they could cause aberrations in the functioning of *manas*(mind) while producing *mada* (delusional/intoxicated state) in an individual. The mental status of psychotic patients is vividly described while explaining the clinical aspect of the disease. The description suggests that a patient of unmada develops derangement of all the activities of *manas*(mind), *buddhi*(intellect), *ahamkara*(ego) and *indriyas* (sense organs). The patient develops thought disturbances in the form of abnormalities of *chintana*(thinking), *vichara*(discriminating) and *uha*(analyzing), derangement of memory in the form of *smriti nasa* (memory loss.) and *smriti bhramsha* (memory impairment), behavioral, social and emotional disturbances in the form of abnormalities of *achara*, *dharma* and *bhavas* along with functional derangement of *indriyas* which is manifested clinically as disturbed speech and other variants such as incoherence (*abaddha vakyam*), thought

blocking (*hridaya shunyata*), loosening of associations, neologism, echolalia etc. and various psychomotor disturbances.

Unmada is classified into two broad categories: *nija*(endogenous), or those caused by internal imbalance of *dosha* i.e. *vata*, *pitta*, *kapha* and *sannipatata*, and *agantu nimitta*, i.e., those caused by exogenous factors. Sushruta<sup>357</sup> and Vaghbhata - both are of the opinion that unmada is of six types, of which four are due to *doshas*, the fifth is *madyaja* (like intoxications) and sixth is *vishaja* (poison-based or poison-like). Both have described the *agantu unmada* separately as the condition of *amanushopasarga* (due to affliction of supra-human power) and *bhuta badha* (due to affliction of demons), under the heading *amanusopasarga pratishedha* (treatment of affliction of supra-human power) and *bhuta badha pratisedha* (treatment of affliction of demons) respectively. The body of knowledge within Ayurveda dedicated to psychiatry underscores the advancement in scientific knowledge on this subject that existed thousands of years ago.

## Sanskrit Text, Transliteration and English Translation

अथात उन्मादनिदानं व्याख्यास्यामः॥१॥

इति ह स्माह भगवानात्रेयः॥२॥

athāta unmādanidānam vyākhyāsyāmah॥1॥

iti ha smāha bhagavānātrēyah॥2॥

athAt UnmadaanidAnaM vyAkhyAsyAmaH॥1॥

Iti ha smAha bhagavAnAtreyaH॥2॥

Now we shall expound the chapter “Unmada Nidana” (Diagnosis and etiopathogenesis of psychosis disorders). Thus said Lord Atreya.[1- 2]

### Five types of unmada

इह खलु पञ्चोन्मादा भवन्ति।

तद्यथा- वातपित्कफसन्निपातागन्तुनिमित्ताः॥३॥

ihā khalu pañcōnmādā bhavantī।

tadyathā- vātapittakaphasannipātāgantunimittāḥ॥३॥

Iha Khalu pa~jcommAdA bhavantī।

tadyathā- vAtapittakaphasannipAtAgantunimittAH॥३॥

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<sup>357</sup> Venkataraman S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

There are five types of unmada such as those caused due to the three *doshas*, *sannipata* (simultaneous vitiation of the three *doshas*), and exogenous causes. [3]

### Individuals prone to unmada

तत्र दोषनिमित्ताश्चत्वारः पुरुषाणामेवंविधानं क्षिप्रमभिनिर्वर्तन्ते; तद्यथा-  
 भीरुणामुपक्लिष्टसत्त्वानामृत्सन्नदोषाणां समलविकृतोपहितान्यनुचितान्याहारजातानि  
 वैषम्ययुक्तेनोपयोगविधिनोपयुज्जानानां तन्त्रप्रयोगमपि विषममाचरतामन्याश्च शरीरचेष्टा विषमा:  
 समाचरतामत्युपक्षीणदेहानां व्याधिवेगसमद्भ्रमितानामपहतमनसां वा  
 कामक्रोधलोभहर्षभयमोहायासशोकचिन्ताद्वेगादिभिर्भूयोऽभिघाताभ्याहतानां वा मनस्युपहते बुद्धौ च  
 प्रचलितायामङ्ग्यदीर्णा दोषाः प्रकपिता हृदयमपसृत्य मनोवहानि स्रोतांस्यावृत्य जनयन्त्यन्मादम्॥४॥

tatra dōšanimitāścatvārah puruṣāṇāmēvaṁvidhānārī kṣipramabhinirvartantē; tadyathā  
bhīrūṇāmupakliṣṭasattvānāmutsannadōśāṇāṁsamalavikṛtōpahitānyanucitānyāhārajātān  
i vaiśamyayuktēnōpayōgavidhinōpayuñjānānāṁ tantraprayōgamapi  
viśamamācaratāmanyāśca śaśracēṣṭā viśamāḥsamācaratāmatyupakṣīṇadēhānāṁ  
vyādhivēgasamudbhramitānāmupahatamanasāṁ [1]  
vākāmakrōdhalōbhaharṣabhayamōhāyāsaśōkacintōdvēgādibhirbhūyō'bhīghātābhyāhat  
ānāṁ vā manasyupahatē buddhau ca pracaṭitāyāmabhyudīrṇā [2] dōśāḥprakupitā  
hrdayamupasṛtya manōvahāni srōtāṁsyāvṛtya janayantyunmādam||4||

Tatra doṣanīmitta scatvarah puruṣaḥ anām evaividhānām kṣipramabhinirvartante;  
tadyathā

—bhIrUNAmupakliShTasattvAnAmutsannadoShANAMsamalavikRutopahitAnyanucitAn  
yAhArajAtAnivaiShamyayuktenopayogavidhinopayu~jjAnAnAM tantraprayogamapi  
viShamAcaratAmanyAshcaharIraceShTA viShamAHsamAcaratA  
matyupakShINadehAnAM vyAdhivegasamudbhramitAn AmupahatamanasAMvA  
kAmakrodhalobhaharShabhayamohAy AsashokacintodvegAdibhirbhUyo~abhighAt  
AbhyAhatAnAM vA manasyupahate buddhau ca pracalitAyAmabhyudIrNA doShAH  
prakupitAhRudayamupasRutyA manovahAni srotAMsyAvRutyA  
janayantyUnmadaam||4|| tatra doShanimitAshcatvAraH

This verse describes the qualities of a person prone to getting afflicted with unmada, as well as the conditions that are conducive to the affliction of the disease:

- Four types of *doshika unmada* quickly manifest in individuals who are fearful, confused and complicated, who do not know societal rules and norms, and who lead erratic lifestyles and dietary habits (unclean, unwholesome, untimely eating habits, as well as neglecting any prescribed dietetic rules). *Doshas* in such individuals are in a volatile state and are prone to getting vitiated.
  - Resorting to specific lifestyle activities that are not conducive to good health, especially when
    - the body is exceedingly weak & cachexic;
    - the person is ailing from various diseases;
    - the mind is afflicted repeatedly by desires, anger, greed, excitement, fear, attachment, exertion, anxiety and grief; and

- the person is subjected to excessive mental trauma / physical assault.

Such individuals often get afflicted with subclinical mental disorders, leading to unstable intellect because of volatile *doshas*. When the seat of consciousness, wisdom, and the system that regulates mental activities are badly affected, then all these factors lead to the manifestation of unmada. [4]

### Types of cognitive distortions

उन्मादं पुनर्मनोबुद्धिसञ्ज्ञाजानसमृतिभक्तिशीलचेष्टाचारविभ्रमंविद्यात्॥५॥

unmādām punarmanōbuddhisañjñājñānasmr̥tibhaktisīlacakēṣṭācāravibhramam [1]  
vidyāt||5||

Unmadaam

punarmanobuddhisajjAj~jAnasmRutibhaktishllaceShTAcAravibhramavidyAt||5||

unmada is again defined as cognitive distortion pertaining to mind, intellect, consciousness, knowledge, memory, desire, attitude, activities and behavior. [5]

### Premonitory symptoms

तस्येमानि पूर्वरूपाणि; तदयथा- शिरसः शन्यता, चक्षुषोराकुलता, स्वनः कर्णयोः, उच्छ्रवासस्याधिक्यम्, आस्यसंस्वरणम्, अनन्नाभिलाषारोचकाविपाकाः, हृदग्रहः, ध्यानायाससम्मोहोद्वेगाश्चास्थाने, सततं लोमहर्षः, ज्वरश्चाभीक्षणम् उन्मत्तचित्तत्वम्, उदर्दित्तवम् अदिताकृतिकरणं च व्याधेः, स्वप्ने चाभीक्षणं दर्शनं आन्तचलितानवस्थितानां रूपाणामप्रशस्तानां च तिलपीडकंचक्राधिरोहणं वातकण्डलिकाभिश्चोन्मथनं निमज्जनं च कलुषाणामभसामावर्ते चक्षुषैश्चापसर्पणमिति(दोषनिमित्तानामुन्मादाना पूर्वरूपाणि भवन्ति)||६॥

tasyemāni pūrvarūpāṇi; tadyathā- śirasah śūnyatā, cakṣuśōrākulatā, svanah karṇayoh, ucchvāsasyādhikyam, āsyasamravaṇam, anannābhilāṣārōcakāvipākāḥ, hṛdgrahaḥ, dhyānāyāsasammohōdvēgāścāsthānē, satataṁ lōmaharṣah, jvaraścābhīkṣṇam, unmattacitttvam, udarditvam [1] , arditākṛtikaraṇam ca vyādhēḥ, svapnēcābhīkṣṇam darśanam bhrāntacalitānavasthitānāṁ rūpāṇāmapraśastānāṁ ca tilapīḍakacakrādhirōhaṇam vātakundālikābhiścōnmathanam nimajjanam cakaluṣāṇāmambhasāmāvartē cakṣuśōścāpasarpaṇamiti [2] (dōśanimittānāmunmādānāṁ pūrvarūpāṇi bhavanti)||6||

Tasyemani pUrvarUpA Ni; tadyathA- shirasaH shUnyatA, cakShuShorAkulatA, svanaH karNayoH, ucchvAsasyAdhikyam, AsyasaMsravaNam, anannAbhilAShArocakAvipAkAH, hRudgraHaH, dhyAnAyAsasammohodvegAshcAsthAne, satataM lomaharShaH, jvarashcAbhIkShNam, unmattacitttvam, udarditvamarditAkRutikaraNaM ca vyAdheH, svapne cAbhIkShNaM darshanaM bhrAntacalitAnavasthitAnAM rUpANAmaprashastAnAM ca tilapiDakacakrAdhirohaNaM vAtakuNDalikAbhishconmathana nimajjanaM ca kaluShANAmambhasAm AvartecakShuShoshc ApasarpaNamiti (doShanimitAnAm UnmadaAnAM pUrvarUpA Ni bhavanti)||6||

Following are the premonitory symptoms of unmada:

- Blankness of thought,
- Restless eyes,
- Tinnitus,
- Prolonged exhalation,
- Hyper-salivation,
- Disinclination towards food associated with anorexia and indigestion,
- Feeling of tightness in cardiac region,
- Uncalled for attention, fatigue, confusion and panic,
- Continuous horripilation,
- Frequent fever,
- Insanity,
- Erythematous rashes over the body,
- Distorted faces (as in Bell's palsy or facial paralysis)
- Dreams with the following recurrent themes–
  - Terrifying & inauspicious objects that are wandering, moving and unstable;
  - Riding over the wheel of an oil press;
  - Being churned by whirl-winds;
  - Sinking in dirty whirl-pools; and
  - Distortion of eyes.

These are the pre-monitory symptoms of unmada caused by the vitiation of *doshas*. [6]

### Specific features of *vatika* type unmada

ततोऽनन्तरमेवमुन्मादाभिनिर्वृत्तिरेव। तत्रेदमुन्मादविशेषविज्ञानं भवति; तदयथा- परिसरणमजस्रम्, अक्षिभ्रूवौष्ठांसहन्वग्रहस्तपादाङ्गविक्षेपणमकस्मात्, सततमनियतानां च गिरामुत्सर्गः, फेनागमनमास्यात्, अभीक्षणं स्मितहसितनृत्यगीतवादित्रसम्प्रयोगाश्चास्थाने, वीणावंशशङ्खशम्यातालशब्दानकरणमसाम्ना, यानमयानैः, अलङ्करणमनलङ्कारिकैर्द्रव्यैः, लोभश्चाभ्यवहार्यज्वलब्धेषु, लब्धेषु चावमानस्तीव्रमात्सर्यं च, काश्यं, पारुष्यम्, उत्पिण्डितारुणाक्षता वातोपशयविपर्यासादनुपशयता च; इति वातोन्मादलिङ्गानि भवन्ति(1);

tatō'nantaramēvamunmādābhinirvṛttirēval| tatrēdamunmādaviśēśavijñānam bhavati;  
tadyathā- parisaraṇamajasram,  
akṣibhruvauṣṭhāṁsahanagrahastapādāṅgavikṣēpaṇamakasmāt [1] ,  
satataṁaniyatānāṁca girāmutsargah, phēnāgamanamāsyāt, abhīkṣṇāṁ  
smītaḥasitaṇṭyagītavāditrasamprayōgāścāsthānē,  
vīṇāvamśaśāṅkhaśamyātālaśabdānukaraṇamasāmnā,yānamayānaiḥ,  
alaṅkaraṇamanaṅkārikairdravyaiḥ, lōbhaścābhyaवahāryēśvalabdhēsu, labdhēsu [2]  
cāvamānastīvramātsaryam ca, kārśyam, pāruṣyam, utpiṇḍitāruṇākṣatā,  
vātōpaśayaviparyāsādanupaśayatā ca; iti vātōnmādaliṅgāni bhavanti(1);

tatredamUnmadaavisheShavij~jAnaM bhavati; tadyathA- parisaraNamajasram, akShibhruvauShThAMsahanvagrahastapAdA~ggavikShepaNamakasmAt satatamaniyanAM ca girAmutsargaH, phenAgamanamAsyAt, abhlkShNaM smitahasitanRutyagltavAditrasamprayogAshcAsthAne, vINAvaMshasha~gkhashamyAtA lashabdAnukaraNamasAmnA, yAnamayAnaiH, ala<sub>gkaraNamanala</sub>gkArikairdravyaiH, lobhashcAbhyavahAryeShvalabdheShu, labdheShu cAvamAnastlvramAtsaryaM ca, kArshyaM, pAruShyam, utpiNDitAruNAkShatA, vAtopashayaviparyAsAdanupashayatA ca; iti vAtomAdali~ggAni bhavanti(1);

After the above stage, unmada manifests. The distinctive features of *vatika* type of unmada are as follows:

- Constant wandering
- Sudden spasm of eyes, eyebrows, lips, jaws, and irregular movements of shoulder, fore-arms and legs;
- Continuous, irrelevant and incoherent speech;
- Frothing from the mouth;
- Frequent smiling, laughing, dancing, singing and playing musical instruments in inappropriate situations;
- Loudly imitating the sounds of lute, flute, conch, *samya* (cymbal played by right hand), and *tala* (cymbal played by left hand);
- Riding phantom vehicles;
- Adoration of self by false ornaments;
- Craving for food articles that are not available;
- Disgust and hatred for food articles that are readily available.
- Emaciation and roughness;
- Protruding dusky red eyes;
- Aggravation by *vata*-provoking factors; and
- Pacification by factors which are opposite to *vata*

These are the features of *vatika* type of unmada. [7-1]

### Features of *paitika* type unmada

अमर्षः, क्रोधः, संरम्भश्चास्थाने, शस्त्रलोष्ट्रकशाकाष्ठमष्टिभिरभिहननं स्वेषां परेषां वा, अभिद्रवणं, प्रच्छायशीतोदकान्नाभिलाषः, सन्तापश्चातिवेलं, तामहैरितहारिद्रसरब्धाक्षता, पितोपशयविपर्यासादनुपशयता च; इति पितोन्मादलिङ्गानि भवन्ति(२) ;

amarṣāḥ, krōdhāḥ, saṁrambhaścāsthānē,  
śastralōṣṭrakaśākāṣṭhamuṣṭibhirabhihananāṁ svēṣāṁ parēṣāṁ vā, abhidravaṇāṁ,  
pracchāyaśītōdakānñābhilāṣāḥ, santāpaścātivēlāṁ, tāmrarharitahāridrasaṁrabdhākṣatā,  
pittōpaśayaviparyāsādanupaśayatā ca; iti pittōnmādalingāni bhavanti(2);

Amarshah krodhaH, saMrambhashcAsthAne,  
shastralohTrakashAkAShThamuShTibhirabhihananaM sveShAM pareShAM vA,

abhidravaNaM, pracchAyashItodakAnnAbhilAShaH, santApashcAtivelam, tAmraharitahAridrasaMrabdhAkShatA, pittopashayaviparyAsAdanupashayatA ca; iti pittonmAdali~ggAni bhavanti(2);

- Intolerance, anger and excitement at inappropriate occasions;
- Inflicting injury on self or on others by weapons, brickbats, whips, sticks and fist.
- Running around
- Desire for shade, cold water and food having cooling effect;
- Prolonged anguish;
- Ferocious eyes with coppery, green or yellow color;
- Aggravation of the signs and symptoms by *pitta* provoking factors
- Pacification by factors which are opposite to *pitta*

are the features of *paitika* type of *unmada*.[7-2]

### Features of *kaphaja* type *unmada*

स्थानमेकदेशे, तष्णीम्भावः, अल्पशश्चड्क्रमणं, लालाशिङ्घाणकस्वरणम्, अनन्नाभिलाषः, रहस्कामता, स्वप्ननित्यता, शौचद्वेषः, बीभत्सत्वं, श्वयथुरानने, शुक्लस्तिमितमलोपदिग्धाक्षत्वं, श्लेष्मोपशयविपर्यासादनुपशयता च; इति श्लेष्मोन्मादलिङ्गानि भवन्ति(3); त्रिदोषलिङ्गसन्निपाते तु सान्निपातिकं विद्यात्; तमसाध्यमाचक्षते कुशलाः॥७॥

sthānamēkadēśē, tūṣṇīmbhāvah, alpaśaścaṅkramaṇam, lālāśiṅghāṇakasravaṇam, anannābhilāṣah, rahaskāmatā, bībhatsatvarṁ, śaucadvēṣah, svapnānyatā, śvayathurānanē, śuklastimitamalōpadigdhākṣatvarṁ, ślēṣmōpaśayaviparyāsādanupaśayatā ca; iti ślēṣmōnmādalīṅgāni bhavanti(3); tridōṣaliṅgasannipātē tu sānnipātikam vidyāt; tamasādhyamācakṣatē kuśalāḥ॥७॥

sthAnamekadeshe, tUShNImbhAvaH, alpashashca~gkramaNaM, IAIASHI~gghANakasravaNaM, anannAbhilAShaH, rahaskAmatA, blbhatsatvaM, shaucadveShaH, svapnānyatA, shvayathurAnane, shuklastimitamalopadigdhAkShatvaM, shleShmopashayaviparyA sAdanupashayatA ca; iti shleShmonmAdali~ggAni bhavanti(3); tridoShali~ggasannipAte tu sAnnipAtikaM vidyAt; tamasAdhyamAcakShate kushalAH॥७॥

- Prefers to live at one place (doesn't move/ immobility)
- Meek and mum, prefers not to speak;
- Excessive salivation and nasal secretions;
- Disinclination for food
- Prefers loneliness
- Frightening appearance;
- Aversion for cleanliness;
- Always drowsy;
- Edematous face;
- White and timid eyes full of dirt;

- Aggravation of the signs & symptoms by *kapha* provoking factors
- Pacification by factors which are opposite to *kapha*

These are the features of *kaphaja* type of unmada.

Features of *sannipatika* type unmada: In the unmada caused by the combined vitiation of all the three *doshas*, all the symptoms mentioned above are simultaneously manifested. This type of unmada is considered to be incurable. [7-3]

## Management of unmada

साध्यानां तु त्रयाणां साधनानि- स्नेहस्वेदवमन विरेचनास्थापनानुवासनोपशमन  
नस्तःकर्मधैर्मधैर्पनाऽज्जनावपीड प्रधमनाभ्युद्गप्रदेह परिषेकानुलेपनवधबन्धनावरोधन  
वित्रासनविस्मापनविस्मारणापतर्पणं सिरात्यधनानि, - भोजनैविधानं च यथास्वं युक्त्या, यच्चान्यदपि  
किञ्चिन्निदानविपरीतमौषधं तदपि कार्यं स्यादिति॥८॥

sādhyānāṁ tu trayāṇāṁ sādhanāni-  
snēhasvēdavamanavirēcanāsthāpanānuvāsanōpaśamananastahkarmadhūmadhūpanā  
ñjanāvapīḍapradhamanābhyaṅgapradēhapariṣēkānulēpanavadhabandhanāvarōdhana-  
vitrāsanavismāpanavismāraṇāpatarpaṇasirāvyadhanāni, bhōjanavidhānāṁ ca  
yathāsvāṁ yuktyā, yaccānyadapi kiñcinnidānaviparītamauṣadhaṁ kāryāṁ  
tadapisyāditi॥८॥

SadhyanaM tu trayANAM sAdhanAni -snehasvedavamanavirecan  
AsthApanAnuvAsanopashamananastaHkarmadhUmadhUpanA~janAvaplDa  
pradhamanAbhya~ggapradehapariShekAnulepanavadhabandhanAvarodhana-  
vitrAsanavismApanavismAraNApatarpaNasirAvyadhanAni,ca yathAsvaM yuktyA,  
yaccAnyadapi ki~jcinnidAnaviparItamauShadhaM tadapi kAryaM syAditi॥८॥

Modalities of treatment of the three types of curable unmada are:

- Oleation, fomentation, emesis, purgation, *asthapanā* enema, *anuvasana* enema
- Alleviation therapies
- Nasal medication, smoking, fumigation, collyrium, *avapida* and *pradhamana* types of nasal medication
- Massage, ointment, affusion, and unction
- Assaulting at times, tying, solitary confinement, frightening, and inducing shock
- Depleting therapies and venesection.

Suitable diets should be given according to the requirement of the patient. Such other therapies as would work against the causative factors of the disease should also be given. [8]

भवति चात्र-

उन्मादान् दोषजान् साध्यान् साधयेद्भिषगुत्तमः।

अनेन विधियुक्तेन कर्मणा यत् प्रकीर्तितम्॥९॥

bhavati cātra-

unmādān dōṣajān sādhyān sādhayēdbhiṣaguttamah|  
anēna vidhiyuktēna karmanā yat prakīrtitam||9||

Bhavati cAtra-

UnmadaAn doShajA sAdhyAn sAdhayedbhiShaguttamaH|  
Anena vidhiyuktena karmaNA yat prakIrtitam||9||

Thus it is said :

A competent physician should selectively employ the above-mentioned therapies to treat the curable types of unmada caused by the vitiation of *doshas* as per the fundamental principles of the prescribed therapy. [9]

### Exogenous unmada

यस्तु दोषनिमित्तेभ्य उन्मादेभ्यः समुत्थानपूर्वरूपलिङ्गवेदनोपशयविशेषसमन्वितो  
भवत्युन्मादस्तमागन्तुकमाचक्षते।  
केचित् पुनः पूर्वकृतं कर्माप्रशस्तमिच्छन्ति तस्य निमित्तम्।  
तस्य च हेतुः प्रजापराधं एवेति भगवान् पुनर्वसुरात्रेयः।  
प्रजापराधादृद्ययं देवर्षिपितृगन्धर्वयक्षराक्षसपिशाच गुरुवृद्धसिद्धाचार्यपूज्यानवमत्याहितान्याचरति,  
अन्यद्वा किञ्चिदेवविधं कर्माप्रशस्तमारभते; तमात्मना हतमुपधनन्तो देवादयःकुर्वन्त्युन्मत्तम्॥१०॥

yastu dōṣanimittēbhya unmādēbhyaḥ  
samutthānapūrvarūpaliṅgavēdanōpaśayaviśēśasamanvitō  
bhavatyunmādastamāgantukamācakṣatē|

kēcit punaḥ pūrvakṛtam karmāpraśastamicchanti tasya nimittam|

tasya [1] ca hētuḥ prajñāparādha ēvēti bhagavān punarvasurātrēyah|

prajñāparādhāddhyayaṁ  
dēvarśipitṛgandharvayakṣarākṣasapiśācaguruvṛddhasiddhācāryapūjyānavamatyāhitāny  
ācarati, anyadvā kiñcidēvarāvidharmākarmāpraśastamārabhatē; tamātmanā  
hatamupaghnantō dēvādayaḥ kurvantyunmattam||10||

Yastu dosanimittebhayah Unmadaebhyah samutthAn purvarUpa linga vedanopaSaya  
visesa samanvito bhavatyUnmadaastamAgantukamAcakShate Kecit punaH  
pUrvakRutaM karmAprashastamicchanti tasya nimittam|

hetuH ca praj~jAparAdha eveti bhagavAn punarvasurAtreyaH|

praj~jAparAdhAddhyayaM devarShipitRugandharvayakSharAkShasapishA  
caguruvRuddhasiddhAcAryapUjyAnavamatyAhitAnyAcarati, anyadvA

ki~jcidevaMvidhaM karmAprashastamArabhate; tamAtmanAhatamupaghnanto  
devAdayaH kurvanyunmattam||10||

The type of unmada having etiology, premonitory symptoms, signs and symptoms, pain and favorable therapeutics (*upashaya*) different from those of the types of unmada caused by the vitiation of *doshas* are known to be of exogenous type. Some scholars hold the view that this type of unmada is caused by the effect of the activities of the past life. Lord Atreya considers intellectual errors as the causative factor of this condition. Due to intellectual errors, the patient disregards the Gods, ascetics, ancestors, *gandharvas*, *yakshas*, *rakshasas*, *pishachas*, preceptors, elders, teachers and the other respectable ones. He also resorts to undesirable and inauspicious (or blasphemous) activities. The gods etc. cause unmada in him because of his own inauspicious activities. [10]

### Premonitory symptoms of exogenous unmada

तत्र देवादिप्रकोपनिमित्तेनागन्तुकोन्मादेन पुरस्कृतस्येमानि पूर्वरूपाणि भवन्ति; तद्यथा-  
देवगोब्राह्मणतपस्विनां हिंसारूचित्वं, कोपनत्वं, नृशंसाभिप्रायता, अरतिः औजोवर्णच्छायाबल  
वपुषामुपतप्तिः, स्वप्ने च देवादिभिरभिभृत्सनंप्रवर्तनं चेति; ततोऽनन्तरमुन्मादाभिनिर्वृतिः॥११॥

tatra dēvādiprakōpanimittēnāgantukōnmādēna puraskṛtasyēmāni pūrvarūpāṇi bhavanti;  
tadyathā- dēvagōbrāhmaṇatapasvināṁ hīr̄ṣārūcītvāṁ,  
kōpanatvāṁ, nr̄śāmīsābhīprāyatā, aratiḥ, ojōvarṇacchāyābalavapuṣāmupataptih, svapnē  
ca dēvādibhirabhibhartsanāṁ pravartanaṁ cēti; tatō'nantaramunmādābhīnirvṛttiḥ॥११॥

tatra devAdiprakopanimittenAgantukonmAdena puraskRutasyemAni pUrvarUpANI  
bhavanti;tadyathA-devagobrAhmaNatapasvinAM hiMsArucitvaM,kopanatvaM,  
nRushaMsAbhiprAyatA, aratiH,ojovarNacchAyAbalavapuShAmupataptiH,svapne ca  
devAdibhirabhibhartsanaM pravartanaM  
ceti;tato~anantaramUnmadaAbhinirvRuttiH॥11॥

The premonitory symptoms of exogenous unmada are as follows:

- Desire for inflicting injury upon the gods, cows, brahmins and ascetics;
- Anger;
- Desire for inflicting cruel acts, torture, etc. on living beings
- Restlessness
- Impairment of *ojas*, colour, complexion and physical strength
- Abuse and incitement of the gods etc. in dreams.

unmada manifests soon after the occurrence of these premonitory symptoms. [11]

तत्रायमुन्मादकराणां भूतानामुन्मादयिष्यतामारम्भविशेषो भवति; तद्यथा- अवलोकयन्तो देवा  
जनयन्त्युन्मादं, गुरुवृद्धसिद्धमहर्षयोऽभिशपन्तः, पितरो दर्शयन्तः स्पृशन्तो गन्धर्वाः, समाविशन्तो  
यक्षाः राक्षस्त्वात्मगन्धमाघापयन्तः, पिशाचाः पुनरारुह्य वाहयन्तः॥१२॥

tatrāyamunmādakarāṇāṁ bhūtānāmunmādayisyatāmārambhaviśēṣō bhavati; tadyathā-  
avalōkayantō dēvā janayantyunmādaṁ,guruvṛddhasiddhamaharṣayō'bhiśapantah,  
pitarō darśayantah [1] , sprśantō gandharvāḥ, samāviśantō yakṣāḥ,  
rākṣasāstvātmagandhamāghrāpayantah, piśācāḥpunarāruhya vāhayantah||12||

tatrAyam Unmadakaranam bhUtAnAmUnmadaayiShyatAmArambhavisheSho bhavati;  
tadyathA-avalokayanto devA janayantyUnmadaaM,  
guruvRuddhasiddhamaharShayo~abhishapantaH, pitaro darshayantaH spRushanto  
gandharvAH, samAvishanto yakShAH,  
rAkShasAstvAtmagandhamAghrApayantaH,pishAcAH punarAruhya vAhayantaH||12||

The various divine entities unleash their wrath on the individual as follows:

- Godly spirits cause *devonmada* (divine unmada)
- Preceptors, elders, adepts and ascetics cause unmada by their curse
- Ancestors by manifesting themselves;
- *Gandharvas* by their touch;
- *Yakshas* by entering the host;
- *Rakshasas* by making the person inhale the odor of their bodies,
- *Pishachas* by seizing and riding the host.[12]

### Symptoms of exogenous unmada

तस्येमानि रूपाणि भवन्ति ; तद्यथा- अत्यात्मबलवीर्यं पौरुषपराक्रमं  
ग्रहणधारणस्मरणज्ञानवचनविज्ञानानि; अनियतश्चोन्मादकालः||१३||

tasyēmāni rūpāṇi bhavanti; tadyathā-  
atyātmabalavīryapauruṣaparākramagrahanadadhāraṇasmaraṇajñānavacanavijñānāni [1] ,  
aniyataścōnmādakālah||13||

rUpANI bhavanti;tadyathAatyAtmabalavIryapauruShaparAkramagrahaNadhAra  
NasmaraNajjAnavacanavijjAnAni aniyatashcommAdakAlaH||13||

Characteristics of a patient afflicted with exogenous unmada are:

Untimely, uncertain and uncalled for manifestations superhuman strength, valor, manliness, enthusiasm, power of understanding and retention, memory, spirituality, logical and scientific knowledge and power of speech. [13]

उन्मादयिष्यतामपि खलु देवर्षिपितृगन्धर्वयक्षराक्षसपिशाचानां गुरुवृद्धसिद्धानां वा  
एष्वन्तरेष्वभिगमनीयाः पूरुषा भवन्ति; तद्यथा- पापस्य कर्मणः समारम्भे, पूर्वकृतस्य वा कर्मणः  
परिणामकाले, एकस्य वा शून्यगृहवासे, चतुष्पथाधिष्ठाने वा, सन्द्यावेलायामप्रयत्नभावे वा पर्वसन्धिषु वा  
मिथुनीभावे, रजस्वलाभिगमने वा विगुणे, नियमक्रतब्रह्मचर्यभड्गे वा, महाहवे वा, देशकुलपुरविनाशे वा,  
महोग्रहोपगमने वा, स्त्रिया वा प्रजननकाले, विविधभूताशभाशचिस्पशने वा, वमनविरेचनरुधिरसावे,  
अश्चेरप्रयत्नस्य वा चैत्यदेवायतनाभिगमने वा, मांसमधूतिलग्नमद्योच्छष्टे वा, दिग्वाससि वा, निशि  
नगरनिगमचतुष्पथोपवनश्मशानाधातनाभिगमने वा, दैविजगुरुसुरयतिपूज्याभिर्धर्षणे वा,

धर्माख्यानव्यतिक्रमे वा, अन्यस्य वा कर्मणोऽप्रशस्तस्यारम्भे, इत्यभिघातकाला व्याख्याता भवन्ति॥१४॥

unmādayisyatāmapi khalu dēvarśipitṛgandharvayakṣarākṣasapiśācānāṁ  
guruvṛddhasiddhānāṁ vā ēśvantarēśvabhipamanīyāḥ puruṣā bhavanti;  
tadyathā-pāpasyakarmaṇāḥ samārambhe, pūrvakṛtasya vā karmaṇāḥ pariṇāmakālē,  
ēkasya vā śūnyagr̥havāsē catuṣpathādhiṣṭhānē vā, sandhyāvēlāyāmaprayatabhāvē  
vāparvasandhiṣu vā mithunībhāvē, rajasvalābhigamanē vā, viguṇē  
vā'dhyayanabalimaṅgalahōmaprayōgē, niyamavratabrahmacaryabhaṅgē vā, mahāhavē  
vā,dēśakulapuravināsē vā, mahāgrahōpagamanē vā, striyā vā prajananakālē,  
vividhabhūtāśubhāśucisparśanē vā, vamanavirēcanarudhirasrāvē, aśucēraprayatasya  
vācaityadēvāyatanābhigamanē vā, māṁsamadhutilaguḍamadyōcchiṣṭē vā, digvāsasi  
vā, niśi nagaranigamacatuṣpathōpavanaśmaśānāghātanābhigamanē  
vā,dvijagurusurayatipūjyābhidharṣaṇē vā, dharmākhyānavyatikramē vā, anyasya vā  
karmaṇō'praśastasyārambhe, ityabhīghātakālā vyākhyātā bhavanti॥14॥

Unmadayisyatamapi khalu devarShipitRugandharvayakSharAkShasapishAcAnAM  
guruvRuddhasiddhAnAM vA eShvantareShvabhigamanlyAH puruShA  
bhavanti;tadyathA- pApasyam,karmaNaH samArambhe, pUrvakRutasya vA NaH  
pariNAmAkAle,ekasya vA shUnyagRuhavAse catuShpathAdhiShThAne  
vA,sandhyAvelAyAmaprayatabhAvevA parvasandhiShu vA mithunlbhAve,  
rajasvalAbhigamane vA, viguNe vA<sub>adhyayanabalimaṅgalahōmaprayoge</sub>,  
niyamavratabrahmacaryabha~ggevA,mahAhave vA,deshakulapuravinAshe vA,  
mahAgrahopagamane vA, striyA vA prajananakAle,  
vividhabhUtAshubhAshucisparshanevA,vamanavirecanarudhirasrAve,ashuceraprayatas  
yavAcaityadevAyatanAbhigamanevA,  
mAMsamadhutilaguDamadyocchiShTevA,digvAsasi vA,nishi nagaranigama  
catuShpathopavana shmaskAnAghAtanAbhigamane  
vA,dvijagurusurayatipUjyAbhidharShaNe vA, dharmAkhyAnavyatikrame vA, anyasya vA  
karma No~aprashastasyArambhe, tyabhīghAtakAlA vyAkhyAtA bhavanti॥14॥

Persons get afflicted by unmada caused by godly spirits, ascetics, ancestors, *gandharvas, yakshas, rakshasas, pishachas*, preceptors, elders and adepts in the following circumstances, places and time:

- In the beginning of sinful acts;
- When the consequences of prior (sinful) acts of the person (committed in the present life or the past) manifest their effect (karmic effects);
- (Living) in a deserted house or crossing roads alone;
- Sexual intercourse during the junctures of day and night or during the new moon and full moon nights (considered inappropriate and inauspicious for sex).
- Sexual intercourse with a lady during her menstrual period;
- Recitation of scriptures, religious offerings, auspicious rites and sacrifices in improper manner.
- Dishonoring a vow and discontinuing a religious duty or observance of celibacy

- Fierce battles;
- Destruction of countries, communities and towns;
- Onset of inauspicious planets in the sky;
- Post-partum depression;
- Coming in contact with different types of inauspicious and unclean creatures;
- Emesis, purgation and bleeding;
- Visiting a *chaitya* (sacred tree) or temple when unclean and not following the prescribed rules;
- Not using mouthwash after eating meat, honey, sesame seeds, sugar candy and alcohol;
- While being naked;
- Visiting cities, towns, crossroads, gardens, cremation grounds, slaughter houses at night;

Insulting *dvija* (twice born), preceptors, Gods and divinities, ascetics and the learned;

Thus, described were some circumstances in which a person attracts the wrath of gods, divinities, and the sages and gets afflicted with unmada. [14]

त्रिविधं तु खल उन्मादकराणां भृतानामुन्मादने प्रयोजनं भवति; तद्यथा- हिंसा, रतिः, अभ्यर्चनं चेति तेषां तं प्रयोजनविशेषमुन्मत्ताचार विशेषलक्षणैर्विद्यात्। हिंसा, अप्सु वा स्थलाच्छवभ्वे निमज्जति, पतति, शस्त्रकशाकाष्ठलोष्टमुष्टिभिर्हन्त्यात्मानम्, अन्यच्च प्राणवधार्थमारभते किञ्चित्, विद्यात्; तमसाद्यं साध्यौ पुनर्द्वावितरौ॥१५॥

trividham tu khalunmādakarāṇāṁ bhūtānāmumādanē prayōjanam bhavati; tadyathā-himśā, ratiḥ, abhyarcanam cēti| tēṣāṁ tam  
prayōjanaviśēṣamunmattācāraviśēṣalakṣaṇairvidyāt| tatra  
himśārthinōnmādyamānōgnīm pravishati, apsu nimajjati, sthalācchvabhrē vā patati,  
śastrakaśākāṣṭhaloṣṭamuṣṭibhirhantyātmānam, anyaccaprāṇavadhārthamārabhatē  
kiñcit, tamasādhyam vidyāt; sādhyau punardvāvitarau||15||

Trividham Tu khalUnmadaakarANAM bhUtAnAmUnmadaane prayojanaM bhavati;  
yathA hiMsA, ratiH, abhyarcanAM ceti| teShAM taM  
prayojanavisheShamunmattAcAravisheShalakShaNairvidyAt| tatra  
hiMsArthinonmAdyamAno~agniM pravishati, apsu nimajjati, sthalAcchvabhre vA patati,  
shastrakashAkAShThaloShTamuShTibhirhantyAtmAnam, anyacca  
prANavadhArthamArabhatē ki~jcit, vidyat tamasAdhyaM vidyAt; sAdhyau  
punardvAvitarau||15||

unmada is caused by the above mentioned agents with the following objectives:

1. as a consequence of one's sinful acts
2. affection/love/pleasure and
3. to make the individual pay obeisance to Gods

The prognosis of unmada can be judged from the characteristic features of the patient. When the intention of the afflicted agents is to inflict injury, then the patient enters into fire, sinks into water, falls into a pit, provokes others to hurt him, strikes himself with weapons, whips, sticks, brick bats, his own fist etc. He may also adopt to such other means of killing himself. This type of unmada is incurable.

The other two types of intentions i.e. for affection/love/pleasure or to offer prayer give rise to variants of unmada that are curable. [15]

### Treatment of exogenous unmada

तयोः साधनानि-

मन्त्रौषधिमणिमङ्गलबल्युपहारहोमनियमव्रतप्रायश्चित्तोपवास स्वस्त्ययनप्रणिपातगमनादीनि॥१६॥

tayoh sādhanāni-

mantrauṣadhimajimaṅgalabalyupahārahōmāniyamavrataprāyaścittōpavāsa  
svastyayanapraṇipātagamanādīni॥16॥

tayoh sAdhanAni-

mantrauShadhimaNi ma~ggala balyupahArahomaniyama vrataprAyashcitopavAsa  
svastyayana praNipAtagamanAdIni॥16॥

For the curable variants of exogenous unmada, the prescribed therapies are:

- Incantation of *mantras*,
- Wearing of gems and jewels according to astrological indications,
- Performance of auspicious and religious rites and sacrifices, oblations
- Taking a vow, performing religious duties, penance, fasting, blessings, obeisance and pilgrimage. [16]

### Role of *dosha* in causing various types of unmada

एवमेते पञ्चोन्मादा व्याख्याता भवन्ति॥१७॥

ēvamētē pañcōnmādā vyākhyātā bhavanti॥17॥

Evanete pa~jcommAdA vyAkhyAtA bhavanti॥17॥

In the following verses, the five types of unmada have been explained. [17]

ते तु खलु निजागन्तुविशेषेण साध्यासाध्यविशेषेण च प्रविभज्यमानाः

पञ्च सन्तो द्वावेव भवतः। तौ च परस्परमनुबंधनीतः कदाचिद्यथोक्तहेतुसंसर्गात्।

तयोः संसृष्टमेव पूर्वरूपं भवति, संसृष्टमेव च लिङ्गम्। तत्रासाध्यसंयोगं साध्यासाध्यसंयोगं चासाध्यं विद्यात्, साध्यं तु साध्यसंयोगम्।

तस्य साधनं साधनसंयोगमेव विद्यादिति॥१८॥

tē tu khalu nijāgantuviśesēṇa sādhyāsādhyaviśesēṇa ca pravibhajyamānāḥ pañca  
santō dvāvēva bhavataḥ|

tau ca parasparamanubadhnītaḥ kadācid�athōktahētusarṁsargāt|

tayōḥ saṁsṛṣṭamēva pūrvarūpaṁ bhavati, saṁsṛṣṭamēva ca liṅgam|

tatrāsādhyasarṁyōgaṁ sādhyāsādhyasarṁyōgaṁ cāsādhyarṁ vidyāt, sādhyarṁ tu  
sādhyasarṁyōgam|

tasya sādhanarṁ sādhanasarṁyōgamēva vidiyāditi||18||

Te khalunijAgantuvisheSheNa sAdhyAsAdhyavisheSheNa capravibhajyamAnAH pa~jca  
santo dvAveva bhavataH |

tau ca parasparamanubadhnItaH kadAcidyathoktahetusaMsargAt |

tayoH saMsRuShTameva pUrvarUpaM bhavati,saMsRuShTameva ca li~ggam|

tatrAsAdhyasaMyogaM sAdhyAsAdhyasaMyogaM cAsAdhyaM vidiyAt, sAdhyaM tu  
sAdhyasaMyogam| tasya sAdhanaM sAdhanasaMyogameva vidiyAditi||18||

The unmada of five types can be further classified as endogenous or exogenous or as curable or incurable. At times, due to the combination of etiological factors (of endogenous and exogenous types), these could also manifest in hybrid forms. Such forms would exhibit a combination of both the types of unmada in their premonitory as well as actual symptoms. However, it is important to note that:

- Combination of the incurable types or of the curable and incurable types result in an incurable condition.
- Combination of curable types results in curable conditions that should be treated using a combination of therapies. [18]

## Responsible factors for unmada

भवन्ति चात्र-

नैव देवा न गन्धर्वा न पिशाचा न राक्षसाः|

न चान्ये स्वयमक्लिष्टमुपक्लिश्नन्ति मानवम्||१९||

bhavanti cātra-

naiva dēvā na gandharvā na piśācā na rākṣasāḥ|

na cānyē svayamakliṣṭamupakliśnanti mānavam||19||

cAtra-

naiva devA na gandharvA na pishAcA na rAkShasAH|

na cAnyesvayamakliShTamupaklishnanti mAnavam||19||

Neither gods, nor *gandharvas*, nor *pishachas* nor *rakshasas* afflict a person who himself is free from misdeeds. The primary cause of unmada in an individual is the consequences of his own misdeeds and not other agents like the gods etc. [19]

ये त्वेनमनुवर्तन्ते किलश्यमानं स्वकर्मणा ।  
न स तदधैतुकः क्लेशो न ह्यस्ति कृतकृत्यता॥२०॥  
yē tvēnamanuvartantē kliśyamānaṁ svakarmaṇā|  
na sa taddhētukaḥ klēśo [1] na hyasti kṛtakṛtyatā॥20॥  
ye tvenamanuvartante klisyamAnaM svakarmaNA|  
na sa taddhetukaH klesho na hyasti kRutakRutyatA॥20॥

If the primary cause of unmada is misdeeds of the individual, then how could the causation of these exogenous unmada be attributed to divinities? Misdeeds committed already cannot be undone, but good deeds can pacify or neutralize the effects of these exogenous factors. [20]

प्रजापराधात् सम्भूते व्याधौ कर्मज आत्मनः।  
नाभिशंसेदबुधो देवान्न पितॄन्नापि राक्षसान्॥२१॥  
prajñāparādhāt sambhūtē vyādhau karmaja ātmanah|  
nābhiśāmsēdbudhō dēvānna pitṝnnāpi rākṣasān॥21॥  
pragnAparAdhAt sambhUte vyAdhau karmaja AtmanaH|  
nAbhishaMsedbudo devAnna pitRUnnApi rAkShasAn॥21॥

All the diseases whether *karmaja* (due to misdeeds) or *atman* (due to one's self) are caused due to intellectual errors. The Gods, ancestors or *rakshasas* shall not be blamed for any disease. [21]

आत्मानमेव मन्येत कर्तारं सुखदुःखयोः।  
तस्माच्छ्रेयस्करं मार्गं प्रतिपद्येत नो त्रसेत्॥२२॥  
ātmānamēva manyēta kartāram sukhaduhkhayōḥ|  
tasmācchrēyaskaram mārgam pratipadyēta nō trasēt॥22॥  
AtmAnameva manyeta kartAraM sukhaduHkhayoH|  
tasmAcchreyaskaraM mArgaM pratipadyeta no traset॥22॥

One should hold himself responsible for his happiness and miseries. Therefore, one should follow the path of welfare without apprehensions. [22]

देवादीनामपचितिहितानां चोपसेवनम्।

ते च तेऽयो विरोधश्च सर्वमायत्मात्मनि॥२३॥  
 dēvādīnāmapacitirhitānāṁ cōpasēvanam|  
 tē ca [1] tēbhyo virōdhaśca sarvamāyattamātmani॥२३॥  
 devAnAmapacitirhitAnAM copasevanam|  
 te ca tebhyo virodhashca sarvamAyattamAtmani॥२३॥

Prayers to the Gods etc. and resorting to wholesome dietary and lifestyle habits act as antidotes to the misdeeds of the individual. Thus, the choice either to avert or get afflicted with unmada rests with the individual himself. [23]

## Summary

तत्र ६लोकः-

सङ्ख्या निमित्तं प्रागूपं लक्षणं साध्यता न च।  
 उन्मादानां निदानेऽस्मिन् क्रियासूत्रं च भाषितम्॥२४॥

tatra ślōkah-

saṅkhyā nimittāṁ prāgrūpaṁ lakṣaṇāṁ sādhyatā na ca|  
 unmādānāṁ nidānē'smin kriyāsūtram ca bhāṣitam॥२४॥

Tatra shloka-

sa~gkhyA nimittaM prAgrUpaM lakShaNaM sAdhyatA na ca|  
 UnmadaAnAM nidAne~asmin kriyAsUtraM ca bhAShitam॥२४॥

In summary, types of unmada and their etiology, premonitory symptoms, symptoms, curability or otherwise, and their modes of treatment have been described in this chapter. [ 24] Thus ends the seventh chapter on diagnosis of unmada in Nidana Sthana in the treatise composed by Agnivesha and redacted by Charak. [24]

## Tattva Vimarsha(Fundamental Principles)

- The unmada pathology involves psychic *dosha* (*rajas* and *tamas*) and body *doshas* (*vata*, *pitta* and *kapha*).
- The individuals with low mental strength and emotionally unstable with the mind afflicted repeatedly by desires, anger, greed, excitement, fear, attachment, exertion, anxiety and grief are more prone for unmada.
- Improper diet and lifestyle play important role in causing unmada. Therefore these shall be checked in management.
- unmada involves cognitive distortion pertaining to mind, intellect, consciousness, knowledge, memory, desire, attitude, activities and behavior. These factors shall

be assessed to determine severity of disease, management protocol and prognosis.

- The *dosha* dominance shall be assessed for deciding the protocol for management of *nija*(endogenous) unmada.
- Intellectual error is the basic cause of exogenous unmada.
- Exogenous unmada is characterized by untimely, uncertain and uncalled for manifestations, superhuman strength, valor, manliness, enthusiasm, power of understanding and retention, memory, spirituality, logical and scientific knowledge and power of speech.
- The diagnosis of exogenous type is based upon clinical presentation resembling with specific extra-human factors mentioned in the text.
- The treatment of exogenous unmada includes psycho-spiritual therapies.
- No other factor can afflict a person who is free from misdeeds. The primary cause of unmada in an individual is the consequences of his own misdeeds and not other agents like the gods, etc.
- Misdeeds that are committed already cannot be undone, but good deeds can pacify or neutralize the effects of exogenous factors.
- All the diseases are caused due to intellectual errors. The Gods, ancestors or demons shall not be blamed for any disease. One should hold himself responsible for his happiness and miseries. Therefore, one should follow the path of welfare without apprehensions.

## Vidhi Vimarsha (Applied Inferences)

As the present chapter deals with the psychopathogenesis and diagnosis of unmada, the fundamental approach of Ayurveda in the etiopathogenesis of psychiatric diseases needs to be discussed. Charak considers violation of dietetic rules as an important causative factor for unmada. Both body and mind are affected by diet. unmada occurs in individuals taking diet in manners forbidden by the dietetic rules, consuming improper dietary articles, food articles that are unclean and ill prepared, incompatible and vitiated. According to Chandogya Upanishad, quality of mind depends upon the food taken by the individual. Once digested, the food is divided into three components – gross (*sthula*), medium (*madhyam*) and (*sukshma*). The subtle portion of the food nourishes the mind. Bhagavad Gita also opines that the *sattvika*, *rajasika* and *tamasika* types of *buddhi* (intellect) is derived from the characteristics associated with the type of diet. Thus, Ayurveda considers that incompatible, vitiated food articles affect the physical as well as mental state of an individual, predisposing him to psychiatric illnesses in general, if he is already harboring other causative factors.

Secondly, psychiatric illnesses with special reference to unmada are not only associated with the vitiation of *manas doshas* but there is vitiation and provocation of *sharira doshas* as well. It points to the fact that though psychiatric illnesses are associated with subtle pathological changes at the bio-energetic level, they are also simultaneously accompanied by qualitative as well as quantitative changes/imbalances in the

neurotransmitters and other bio-chemicals at the physical level. Thus, the normal psychological processes as well as the psychopathologies, operate simultaneously at multiple levels (biological, bio-energetic) and also at subtler levels where the intangible thought processes start appearing in the relatively tangible field of bio-energy. All this needs extensive exploration using the available scientific tools.

Thirdly, entire thought processes, attitudes, emotional experiences, desires and behaviors of an individual, which are relatively intangible, have the capacity to bring about qualitative as well as quantitative changes in the *manas* and *sharira doshas*, *agni*, and *ojas*. These psychological factors are also capable of bringing about structural as well as functional changes in the *dhatus* (body tissues), *malas* (biological byproducts and wastes) and *srotasas* (macro and micro-channels). These are some of the most fundamental considerations, which needs special attention.

The eight psychological and behavioral factors are described here that get imbalanced when the individual is afflicted with mental diseases. These factors are- *manas*, *buddhi*, *sanjna jnana*, *smriti*, *bhakti*, *sheela*, *chesta* and *aachara*. This provides a basis for objectively and empirically assessing the mental functions of a patient afflicted with unmada. Using this understanding, Ayurvedic institutions have been able to create a rubric to analyze patients and conduct various mental health studies. A three-stepped approach to creating such a scale is as follows:-

1. In depth study of various definitions, synonyms, commentaries available on the eight factors.
2. Screening the available descriptions in a scientific way.
3. Developing an elaborate and objective assessment scale based on Ayurvedic principles for making it more understandable and useful in a clinical set up. The scale has been named as *ashta manas bhava pariksha* (assessment of eight mental faculties).

Now described in some detail would be each of the eight psychological and behavioral factors used in Ayurvedic studies on mental health:

1. The term *manas* in this context refers to the thought, affect and emotional aspect of mind. Therefore, the various kinds of thought abnormalities like delusions and delusional ideations, and states of mood e.g. depressed, elated, anxious etc are assessed under this factor.
2. The term *buddhi* (*ya buddhi niscayatmika*) [Cha.Sa.Sharira Sthana 1/23] refers to intellect, decision making, and problem solving aspects of mental functioning. Standardized tools for assessing intelligence e.g. Weschler Intelligence scale, Bhatia Battery for Performance Test of Intelligence etc. and clinical methods of test judgement are useful in this regard.
3. The term *sanjna jnana* refers to the awareness of surroundings and response to external stimuli and measures, phenomena such as orientation and responsiveness, and attention and consciousness. Clinical methods available for measuring these aspects should be used.

4. The term *smriti* refers to all components of memory, such as immediate retention and recall, recent memory and remote memory including learning acquisition. The available tools of memory measurement viz. digit span, object recall, Weschler Memory scale, PGI Memory scale etc. are useful for assessing this factor.
5. The term *bhakti* refers to the normal, intact, altered and unusual desires related to food, dress, entertainment, study, work, hobby, sex etc. which are measured under this aspect.
6. The term *sheela* refers to habits, temperament and general behavior, which are measured under this aspect.
7. The term *cheshta* measures the psychomotor activity by clinically observing the retardation, agitation, restlessness, co-operativeness/ non-co-operativeness etc. in a psychiatric patient.
8. Finally, the term *achara* refers to personal and social conduct measured by misbehavior, quarrel, disrespect to elders and other respectable and other similar activities by a psychiatric patient.

Some exogenous causative factors of unmada along with their mode of psychiatric infliction in a person have been enumerated below. However, these details are taken with contemporary assumptions, experiences and clinical practices applicable to a particular disease. Many of these beliefs and practices are still extant in many parts of the world. One of the bodies of practices in this field of study, *Bhutavidya*, was one of the eight branches of Ayurveda. The diagnosis of these exogenous factors is based upon the clinical features, behavior patterns and time of affliction. These factors are being studied well under the purview of demonology, parapsychology. The beliefs regarding ghosts, demons are noted and studied to know exact mechanism behind them. However psychiatrist caution to rule out any other mental disorder first before labeling it as a demon. The negative energies in the cosmos may be regarded in view of exogenous factors causing unmada. *Rajas* and *tamas* are responsible for negativities, while *sattva* for positivity. Therefore these must be considered as psycho-dynamic factors to be treated.

Last but not the least, there is a clear message in the chapter that every individual is himself responsible for his wellbeing, happiness and miseries. The behavioral tendencies and lifestyles adopted by the individual are based on his own choices and all types of unmada are the result of intellectual blasphemy by the individual himself – be it endogenous or exogenous.

**Table 1: Behavioral and psychological manifestation of *triguna***

| <i>Sattva</i>              | <i>Rajas</i>                       | <i>Tamas</i> |
|----------------------------|------------------------------------|--------------|
| Enlightening               | Propulsive & dynamic               | Inhibitive   |
| Efforts for more knowledge | Over expression of pain & pleasure | Ignorant     |

| <i>Sattva</i>                              | <i>Rajas</i> | <i>Tamas</i>                      |
|--|--------------|-----------------------------------|
| Cleanliness                                | Active       | Excessive Fatigue of sense organs |
| Theism (Appreciates existence of Almighty) | Industrious  | Atheism                           |
| Straight forward dealing                   | Egoistic     | Inactive                          |
| Polite                                     | Reacting     | Poor                              |
| Gratitude                                  | Angry        | more sleep                        |
| Of good memory, intellect                  | Pretender    | worrying                          |
| Prompt to learn                            | Jealous      | Commits Mistakes                  |
| Serious                                    | Brave        | unhygienic                        |
| Welfare wisher                             | Greedy       |                                   |
|  | Cruel        |                                   |
|  | Tense        |                                   |

Table 2: Predominance of *raja* and *vata*

Disease

Clinical features

Predominant dosha

1. Panic attack  
Palpitation, sweating  
raja, pitta  
Trembling or shaking  
vata  
Sensation of shortness of breath Feeling of choking  
vata  
Chest pain or discomfort  
vata  
Nausea or abdomen distress  
vata  
Feeling dizzy, unsteady lightheaded or Faint  
pitta  
De-realization or depersonalization  
raja, vata and pitta

Feeling of losing control or going crazy  
*raja*  
 Fear of dying  
*raja, vata*  
 Paraesthesia  
*raja, vata*  
 Chills or hot flushes  
*vata*  
*vata-pitta*

**Table 3:**Predominance of *raja* and *vata*

| Disorder            | Clinical features                                    | Predominant dosha        |
|---------------------|--|--------------------------|
| Generalized Anxiety |  |                          |
|                     | Excessive anxiety & worry (apprehensive expectation) | <i>raja, vata</i>        |
|                     | The person finds it difficult to control the worry   | <i>raja, vata</i>        |
|                     | Restlessness   | <i>raja, pitta</i>       |
|                     | Being easily fatigued                                | <i>raja, vata</i>        |
|                     | Difficulty concentrating or mind going blank         | <i>raja, vata</i>        |
|                     | Irritability   | <i>raja, pitta [vata</i> |
|                     | Sleep disturbance                                    | <i>vata</i>              |

**Table 4:**Predominance of *tamas* and *kapha dosha*

| Disease                  | Clinical Features  | Predominant dosha  |
|--------------------------|--|--------------------|
| Major Depressive Illness |  |                    |
|                          | Depressed mood most of day   | <i>tama, kapha</i> |
|                          | nearly every day as indicated by either subjective report (eg. feels sad or empty) or observation made by others (eg. appears fearful) | <i>tama, kapha</i> |
|                          |  | <i>Vata</i>        |

| Disease | Clinical Features   | Predominant <i>dosha</i>       |
|---------|---|--------------------------------|
|         | Markedly diminished interest or pleasure in all or almost all activities most of the day                      | <i>vata, kapha tama, kapha</i> |
|         | Significant weight loss when not dieting or weight gain or decrease or increase in appetite nearly every day. | <i>tama</i>                    |
|         | insomnia or hypersomnia nearly everyday   | <i>kapha tama</i>              |
|         | Psychomotor retardation or agitation  | <i>vata kapha tama</i>         |
|         | fatigue or loss of energy nearly everyday   | <i>tama</i>                    |
|         | Feeling of worthlessness or excessive or inappropriate guilt  | <i>tama kapha</i>              |
|         | Diminished ability to think or concentrate or indecisiveness  | <i>tama kapha</i>              |
|         | Recurrent thoughts of death, recurrent suicidal ideas   | <i>tama, kapha</i>             |

Table 5: Predominance of *Raja* and \*Pitta

*dosha\**

Mania

**Table 6: Predominance of *Raja* and *Vata***  
Schizophrenia

### **Case Paper Format Points**

The format for the clinical assessment of *manovahasrotas* or The psychiatric assessment:

Every psychiatric history should cover the following points:

1. Complaints
2. History of present illness
3. Previous disorders and the nature and extent of treatment.
4. Family history, important for genetic aspects and family influences, helping in understanding the familial traits.
5. Personal history: childhood development, adolescent adjustment, level of education and adult coping patterns.
6. Sexual history
7. Current life functioning
8. Current medications, alcohol or drug abuse

- Personality: is defined as the sum of those characteristics that make a person into individual he is. These characteristics include behaviour, both actions and reactions; attitude to self; ways of relating to others, both socially and sexually, attitude to authority, level of independence, mood, fantasy life, religious beliefs and moral altitudes and interests and hobbies.

#### *The mental status examination*

- Appearance: note unusual modes of dress, use of makeup etc. very helpful for evaluation of *bhootonmada* and *vataja unmada*
- Activity and behavior: Gait, gestures, co-ordination of bodily movements. *akshibhruvaushthamsahavanagrahastapadangavikshepanamakasmat*
- Affect: outward manifestation of emotion such as depression, anger, fear or lack of emotional response eg. *krodha, sudeen*
- Mood: the patients report of feelings and observable emotional manifestations eg. *rahasyakamata, narivikta priyata, amarsha*
- Speech: coherence, spontaneity, articulation, hesitancy in answering and duration and response. Eg. *vaka mandam pratihatavacchayam*
- Content of thought: Association, obsession, depersonalization, delusions, hallucinations, Paranoid, ideation, anger, fear or unusual experiences. Eg. *amartya vaka vikrama virya cheshta dnyanadi vidnyan baladibhi*
- Cognition:
  - Orientation to person, place, time and circumstances.
  - Remote and recent memory and recall
  - Calculation
  - General knowledge
  - Ability to identify by naming, reading and writing
  - Right to Left differentiation
  - Judgment regarding common sense problems

#### *Related Chapters*

- Unmada Chikitsa

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## Apasmara Nidana

### Nidana Sthana Chapter 8. Diagnosis and etiopathogenesis of seizure disorders

#### Abstract

This chapter deals with another psychiatric disorder leading to transient loss of consciousness termed as Apasmara. It describes causative factors, predisposing conditions, pathogenesis, signs, types, and prognosis of apasmara. The clinical presentation of this disease simulates the seizure disorders described in conventional medical literature. Apasmara is a common neuropsychiatric disorder characterized by intermittent loss of consciousness, memory, abnormal movements and blackouts. This chapter explores the basic principles of psychiatric disorders involving memory, mind, consciousness and intellect. These disorders are marked by major pathological obstacles in perception, impaired intellectual functioning, orientation, co-ordination and consciousness. Their management includes avoidance of etiological factors as well as pharmacological and non-pharmacological treatment (including psychological and spiritual therapies). The basic principles described in the present chapter can be helpful in preventing and managing neuro-psychiatric disorders like apasmara in a better way. This chapter also deals with some important aspects of diagnosis. It explains how one disease can trigger another disease i.e. Nidanarthakara roga, leading to the presence of two or more diseases at the same time. This chapter lays down some principles of diagnosis to manage such conditions as well.

**Keywords:** apasmara, transient loss of memory, seizure disorders, epilepsy, mind-heart connection, mind-brain connection.

#### Introduction

In this important section dealing with the diagnoses of some common disorders of the body and the mind, this chapter deals with apasmara, a disorder afflicting the mind and sharing similar etiological and pathological factors as *unmada* (the subject of the preceding chapter). apasmara (Sanskrit for *apa* (to lose) or leave, and *smara* (memory)) is a psychosomatic disorder involving memory, intellect and mind and present with cardinal features such as transient loss of memory, abnormal movements of body and blackouts. apasmara is counted, in Ayurvedic texts, among the eight *mahagada* (most dreadful diseases). The extent of knowledge on the disease indicates that it must have been quite prevalent in antiquity. Ayurvedic scholars have observed that apasmara

simulates epilepsy in its features<sup>358 359</sup>. Epilepsy is a common neuropsychiatric condition involving mainly the brain, nervous system and the psyche. However, Ayurveda emphasizes heart, the abode of consciousness and mind, as its core pathological site while covering diseases of memory, intellect as well as psyche under the umbrella of apasmara.

Causative factors of apasmara can be categorized under dietary, lifestyle, psychological and iatrogenic factors. Vitiated *doshas* get through the vessels of the heart and when exposed to predisposing psychological factors like excess worry, grief, anger, and fear, move upwards from the heart, the abode of all consciousness, to the brain, afflicting the senses while altering memory. This eventually leads to apasmara. The etiology of the disease and specific features of the dominant *doshas* involved, and *nidanarthakara roga* (one disease causing other disease) and its importance in diagnosis and treatment have been described in detail in this chapter, with some important aspects of diagnosis addressed. In some cases, both diseases (the causative and the secondary ones) coexist while in other cases, the causative disease disappears and the new disease remains present. Thus, this chapter, while focusing on apasmara, also talks of complications that lead to secondary conditions and their treatment.

## Sanskrit Text, Transliteration and English Translation

अथातोऽपस्मारनिदानं व्याख्यास्यामः ||१||

इति ह स्माह भगवानात्रेयः ||२||

athātō'pasmāranidānaṁ vyākhyāsyāmaḥ||1||

iti ha smāha bhagavānātrēyah||2||

athAto~apasmAranidAnaM vyAkhyAsyAmaH||1||

iti ha smAha bhagavAnAtreyaH||2||

Now we shall expound the chapter “Apasmara Nidana” (Diagnosis and etiopathogenesis of seizure disorders). Thus said Lord Atreya. [1-2]

### Four types of apasmara

इह खलु चत्वारोऽपस्मारा भवन्ति वातपित्कफसन्निपातनिमित्ताः ||३||

ihā khalu catvārō'pasmārā bhavanti vātapittakaphasannipātanimittāḥ||3||

ihā khalu catvAro~apasmArA bhavanti vAtapittakaphasannipAtanmittAH||3||

<sup>358</sup> Venkataraghvan S., Rajagopalan V, Srinivasan K. Study of doshik involvement in Apasmara (Epilepsy) and its utility. Ancient science of life, Vol.No.VI[3],1987.138-47

<sup>359</sup> Murthy ARV, Singh RH.A Critical study on the Ayurvedic concept of the psychopathological basis of Apasmara. Journal of NIMA XXXII [6] 1990.7-11

There are four types of apasmara caused by *vata*, *pitta*, *kapha* and *sannipatika* (combination of all the three *doshas*).[3]

## Persons prone to apasmara

त एवंविधानं प्राणभूतां क्षिप्रमभिनिर्वर्तन्ते; तद्यथा-  
 रजस्तमोऽयामुपहतचेतसामुद्भान्तविषमबहुदोषाणां समलविकृतोपहितान्यशुचीन्यभ्यवहारजातानि  
 वैषम्ययुक्तेनोपयोगविधिनांपयुञ्जानानां तन्त्रप्रयोगमपि च विषममाचरतामन्याश्च शरीरचेष्टा विषमाः  
 समाचरतामत्यपक्षयाद् वा दोषाः प्रकपिताः रजस्तमोऽयामुपहतचेतसामन्तरात्मनः श्रेष्ठतममायतनं  
 हृदयमुपसृत्योपरि तिष्ठन्ते, तथेन्द्रियायतनानि च | तत्र चावस्थिताः सन्तो यदा हृदयमिन्द्रियायतनानि  
 चेरिताः कामक्रोधभयलोभमोहर्षशोकचिन्तोद्वेगादिभिः सहसाऽभिपूर्यन्ति, तदा जन्तुरपस्मरति ||४||

ta ēvarṇvidhānāṁ prāṇabhr̥tāṁ kṣipramabhinirvartantē; tadyathā- Rajas  
 tamōbhyāmupahatacētasāmudbhṛāntaviśamabahudōṣānāṁ  
 samalavikṛtōpahitānyaśucīnyabhyavahārajātāni  
 vaiśamyayuktēnōpayōgavidhinōpayuñjānānāṁ tantraprayōgamapi ca  
 viśamamācaratāmanyāśca śarīracēṣṭā viśamāḥ samācaratāmatyupakṣayādvā dōṣāḥ  
 prakupitā Rajas tamōbhyāmupahatacētasāmantarātmanah śrēṣṭhatamamāyatanāṁ  
 hṛdayamupasṛtyōpari tiṣṭhantē, tathēndriyāyatanāni ca] tatra cāvasthitāḥ santō yadā  
 hṛdayamindriyāyatanāni cēritāḥ  
 kāmakrōdhabhayalōbhāmōhahaśāśōkacintōdvēgādibhiḥ sahasā'bhīpūrayanti, tadā  
 jantur Apasmarati||4||

ta evaMvidhAnAM prANabhRutAM kShipramabhinirvartante;  
 tadyathA-rajastamobhyAmupahatacetasAmudbhrAntaviShamabahudoShANAMsamalav  
 ikRutopahitAnyashuciNyabhyavahArajAtAni  
 vaiShamyayuktenopayogavidhinopayu~jjAnAnAMtantraprayogamapi ca  
 viShamamAcaratAmanyAshca sharIraceShTA  
 viShamAHsamAcaratAmatyupakShayAdva doShAH prakupitA  
 rajastamobhyAmupahatacetasAmantarAtmanaHshreShThatamamAyatanaM  
 hRudayamupasRutyopari tiShThante, tathendriyAyatanAni ca] tatra cAvasthitAH santo  
 yadA hRudayamindriyAyatanAni  
 ceritAHkAmakrodhabhayalobhamohaharShashokacintodvegAdibhiH  
 sahasA~abhipUrayanti, tadAjanturapasmarati||4||

Individuals get quickly afflicted with apasmara if:

- the mind of an individual is afflicted by *rajas* (mental *dosha* associated with hyperactivity) and *tamas* (mental *dosha* associated with hypoactivity);
- the three *sharira doshas* are imbalanced and excessively aggravated;
- an individual takes food that is impure, untimely, decomposed, possessing antagonistic properties, or touched/cooked by unclean hands
- an individual follows improper methods (of diet and lifestyle, conduct described in Ayurveda) and neglects prescribed rules;
- an individual observes improper techniques (of treatment) and resorts to unhealthy regimen and behavior

- an individual practices improper bodily movements and follows improper postures
- an individual suffers from excessive degeneration or debility.

In the situations mentioned above, the *doshas* get aggravated and affect individuals whose minds are already afflicted by *rajas* and *tamas*. The *doshas* (so aggravated) pervade the heart which is, as mentioned earlier, the abode of consciousness, as well as the sense organs. While there, the *doshas* get further aggravated by emotions such as passion, anger, fear, greed, attachment, excitement, grief, anxiety, perturbation etc., consequently spreading throughout the heart and the sense organs. The individual is then said to have been afflicted with *apasmara*. [4]

### Characteristic features of apasmara

अपस्मारं पुनः स्मृतिबुद्धिसत्त्वसम्प्लवाद्बीभत्सचेष्टमावस्थिकं तमः प्रवेशमाचक्षते ॥५॥

apasmāram punah smṛti buddhi sattva samplavādbībhatsacēṣṭamāvasthikam tamah pravēśamācakṣatē||5||

apasmAraM punaH smRutibuddhisattvasamplavAdblbhatsaceShTamAvasthikaM tamaHpraveshamAcakShate||5||

*apasmara* is characterized by occasional loss of consciousness associated with aberrant activities (like vomiting of froth and abnormal postures of the body) and behavior, due to perversion of memory, intellect and other psychic faculties. [5]

तस्येमानि पर्वरूपाणि भवन्ति; तदयथा- भ्रूव्युदासः

सततमक्षणोवैकृतमशब्दश्रवणंलालासिङ्घाणप्रस्वरणमनन्नाभिलषणमरोचकाविपाकौ हृदयग्रहः कक्षेराटोपो दौर्बल्यमस्थिभेदोऽङ्गमर्दो मोहस्तमसो दर्शनंमूर्च्छा भ्रमश्चाभीक्षणं स्वप्ने च मैदनर्तनव्यधनव्यथनवेपनपतनादीनीति ॥६॥

ततोऽनन्तरमपस्माराभिनिर्वृत्तिरेव ॥७॥

tasyēmāni pūrvarūpāṇi bhavanti; tadyathā- bhrūvyudāsaḥ

satatamakṣṇōrvaiकृतमाशब्दश्रवणाम

lālāsiṅghāṇaprasravaṇamanannābhilaṣaṇamarōcakāvipākau hṛdayagrahaḥ

kukṣērāṭopō daurbalyamasthibhēdōऽगमardō mōhasTamasō darśanam mūrcchā bhramaścābhīkṣṇam svapnē ca madanartanavyadhanavyathanavēpanapatanādīnīti||6||

tatō'nantaramapasmārābhiniर्वृत्तिरेवा||7||

tasyemAni pUrvarUpANI bhavanti; tadyathA-

bhrUvyudAsaHsatatamakShNorvaikRutamashabdasheravaNaMIAIASi~gghANaprasrava NamanannAbhilaShaNamarocakAvipAkau hRudayagrahaH

kukSherATopodaurbalyamasthibhedo<sub>a</sub>ggamardo mohastamaso darshanaM mUrcchA bhramashcAbhlkShNaM svapneca

madanartanavyadhanavyathanavepanapatanAdInIti||6||

tato~anantaramapasmArAbhinirvRuttireval||7||

Premonitory symptoms of apasmara include contraction of eyebrows, erratic and constant movement of eyes, auditory hallucinations, excessive salivation, and nasal discharge. There is frequent accompaniment of anorexia, indigestion, and general disinclination towards food, chest congestion, distension of the lower abdomen accompanied with gurgling sound, weakness, cracking pain in bones and malaise, unconsciousness, a feeling of despondency or depression, fainting and giddiness, and frequent dreams of scenes of intoxication, dancing, murdering, aching, shivering and falling. [6]

These are some common premonitory symptoms of apasmara. [7]

### Specific types and features of apasmara

#### *Vata dosha dominant apasmara*

तत्रेदमपस्मारविशेषविज्ञानं भवति; तद्यथा-

अभीक्षणमपस्मरन्तं, क्षणेन सञ्जां प्रतिलभमानम्, उत्पिण्डिताक्षम्, असाम्नाविलपन्तम्, उद्वमन्तं  
फेनम्, अतीवाध्मातग्रीवम्, आविद्धशिरस्कं, विषमविनताङ्गुलिम्, अनवस्थितपाणिपादम्,  
अरुणपरुषश्यावनखनयनवदनत्वचम्, अनवस्थितचपलपरुषरूपदर्शिनं, वातलानुपशय, विपरीतोपशयं  
च वातेनापस्मरन्तं विद्यात् ||८||

tatrēdamapasmāraviśēsavijñānam bhavati; tadyathā-

abhīkṣṇamApasmarantam, kṣaṇēna sañjñāṁ prati labhamānam, utpiṇḍitākṣam, asāmnā  
vilapantam, udvamantam phēnam, atīvādhmātagrīvam, āviddhāśiraskam,  
viṣamavinatāṅgulim, anavasthitapāṇipādam,  
arūṇaparuṣyāvanakhanayanavadanatvacam,  
anavasthitacapalaparuṣarūpadarśinam, vātalānupaśayaṁ, viparītōpaśayaṁ ca  
vātēnāpasmarantam vidyāt (1)||8||

tatredamapasmAravisheShavij~jAnaM bhavati; tadyathA-

abhIkShNamapasmarantaM, kShaNena sajjAM prati labhamAnam, utpiNDitAkSham,  
asAmnA vilapantam, udvamantaM phenam, atlVAdhmAtagrlvam, AviddhashiraskaM,  
viShamavinatA~ggulim,  
anavasthitapANipAdam, aruNaparuShashyAvanakhanayanavadanatvacam,  
anavasthitacapalaparuSharUkSharUpadarshinaM, vAtalAnupashayaM,  
viparItopashayaM ca vAtenApasmarantaM vidyAt (1)||8||

More frequent episodes of apasmara, episodes of instant loss of consciousness and regain it quickly, bulging or rolling up of eyes, incoherent speech, frothy vomit, excessive stiffness of neck, drooping of the head to one side, irregular contraction of fingers, unstable upper and lower limbs, redness, dryness and grayish tint in the nails, eyes, face and skin, apparent vision or perception of unstable, fickle, coarse and dry objects, conditions associated with consuming *vata*-aggravating diets and alleviation of ailments when subjected to *vata*-pacifying diets.[8-1]

### *Pitta-dominant apasmara*

अभीक्षणमपस्मरन्तं क्षणेन सञ्जां प्रतिलभमानम्, अवकजन्तम्, आस्फालयन्तं भूमिं,  
हरितहारिद्रतामनखनयनवदनत्वचं, रुधिरोक्षितोग्भैरवादौप्तरुषितरूपदर्शिनं,  
पित्तलानुपशयं, विपरीतोपशयं च पित्तेनापस्मरन्तं विद्यात् ||८||

abhīkṣṇāmapasmarantaṁ kṣaṇēna sañjñāṁ prati labhamānam, avakūjantam,  
āspahālayantaṁ bhūmir̥, haritahāridratāmranakhanayanavadanatvacāṁ,  
rudhirōkṣitōgrahairavādīptaruṣitarūpadarśināṁ, pittalānupaśayaṁ, viparītōpaśayaṁ ca  
pittēnāpasmarantaṁ vidyāt (2)||8||

abhlkShNamapasmaraM kShaNena sajjAM prati labhamAnam, avakUjantam,  
AsphAlayantaMbhUmiM,  
haritahAridratAmranakhanayanavadanatvacAM,rudhirokShitograbhairavAdIptaruShitarU  
padarshinaM, pittalAnupashayaM,viparltopashayaM capittenApasmarantaM vidyAt  
(2)||8||

Frequent episodes of apasmara, instant loss of consciousness and regaining it quickly, stertorous breathing, abnormal, dragging-like movement, green, yellow or coppery tint of nails, eyes, face and skin, apparent vision or perception of bleeding, terrifying, horrible, burning and angry looking objects, conditions associated with *pitta*-aggravating diets and alleviation of ailments when subjected to *pitta*-pacifying diets [8-2]

### *Kapha-dominant apasmara*

चिरादपस्मरन्तं, चिराच्च सञ्जां प्रतिलभमानं, पतन्तम, अनतिविकृतचेष्टं, लालामुद्वमन्तं,  
शुक्लनखनयनवदनत्वचं, शुक्लगुरुस्तिनग्धरूपदर्शिनं, श्लेष्मलानुपशयं, विपरीतोपशयं च  
श्लेष्मणाऽपस्मर-न्तं विद्यात् ||८||

cirādapasmarantaṁ, cirācca sañjñāṁ prati labhamānaṁ, patantam, anativikṛtacēṣṭaṁ,  
lālāmudvamantaṁ, śuklanakhanayanavadanatvacāṁ, śuklagurusnigdharūpadarśināṁ,  
ślēśmalānupaśayaṁ, viparītōpaśayaṁ ca ślēśmaṇā'pasmarantaṁ vidyāt (3)||8||

cirAdapasmaraM, cirAcca sajjAM prati labhamAnaM, patantam,  
anativikRutaceShTaM,IAIAmudvamantaM, shuklanakhanayanavadanatvacAM,  
shuklagurusnigdharUpadarshinaM,shleShmalAnupashayaM, viparltopashayaM ca  
shleShmaNA~apasmarantaM vidyAt (3)||8||

Less frequent episodes of apasmara, gradual loss and regain of consciousness, frequently falling down, less pronounced abnormalities in movement, dribbling of saliva, whitish discoloration of nails, eyes, face, and skin, apparent vision or perception of white, heavy and unctuous objects, and conditions associated with consuming *kapha*-aggravating diets and alleviation of ailments when subjected to *kapha*-pacifying diets [8-3]

### *Sannipatika apasmara with dominance of all dosha*

समवेतसर्वलिङ्गमपस्मारं सान्निपातिकं विद्यात्, तमसाध्यमाचक्षते इति चत्वारोऽपस्मारा व्याख्याताः  
||८||

samavētasarvaliṅgamapasmāram sānnipātikarṁ vidyāt, Tamasādhyamācakṣatē ||  
iti catvārō'pasmārā vyākhyātāḥ||8||

samavetasarvali~ggamapasmAraM sAnnipAtikaM vidyAt, tamaSAdhyamAcakShate (4)  
iti catvAro~apasmArA vyAkhyAtAH||8||

*Sannipatika apasmara* (caused by the simultaneous vitiation of all the three *doshas*) shares the symptoms of all the three *doshas* (described above). This condition is incurable.

Thus, four types of apasmara are explained. [8-4]

#### *apasmara with extrinsic factors*

तेषामागन्तुरनुबन्धो भवत्येव कदाचित्, तमुत्तरकालमुपदेक्ष्यामः ।  
तस्य विशेषविज्ञानं यथोक्ततिर्गैर्लिङ्गाधिक्यमदोषलिङ्गानुरूपं च किञ्चित् ॥९॥  
tēśāmāganturanubandhō bhavatyēva kadācit, tamuttarakālamupadēkṣyāmaḥ|  
tasya viśēśavijñānam yathōktaliṅgairliṅgādhikyamadōṣaliṅgānurūpaṁ ca kiñcīt||9||  
teShAmAganturanubandho bhavatyeva kadAcit, tamuttarakAlamupadekShyAmaH|  
tasya visheShavij~jAnaM yathoktali\_ggairli\_ggAdhikyamadoShali~ggAnurUpaM ca ki~jcīt||9||

Sometimes these conditions are associated with extrinsic causative factors described later (in Cikitsa10:53). The symptoms that manifest in such cases, though, are not the same as those caused by vitiated *doshas*. [9]

#### **Management of apasmara**

हितान्यपस्मारिभ्यस्तीक्ष्णानि संशोधनान्युपशमनानि च यथास्वं, मन्त्रादीनि चागन्तुसंयोगे ॥१०॥  
hitānyapasmāribhyastīksṇāni saṁśodhanānyupaśamanāni ca yathāsvaṁ, mantrādīnī cāgantusamyōgē||10||  
hitAnyapasmAribhyastIkShNAni saMshodhanAnyupashamanAni ca yathAsvaM,  
mantrAdInicAgantusaMyoge||10||

Strong elimination and alleviation therapies are effective in alleviating and curing apasmara. When extrinsic causative factors are involved, then *mantras* etc., are considered useful. [10]

#### **Manifestation of various diseases**

तस्मिन् हि दक्षाध्वरध्वंसे देहिनां नानादिक्षु विद्रवतामभिद्रवणतरणधावनप्लवनलङ्घनादैर्देहविक्षोभणौः परागल्मोत्पत्तिरभूत्, हविष्प्राशात् प्रमेहकुष्ठानां, भयत्रासशोकैरुन्मादानां, विविधभूताशुचिस्स्पर्शादपस्माराणां, ज्वरस्तु खलुमहेश्वरललाटप्रभवः, तत्सन्तापाद्रक्तपित्तम्, अतिव्यावायात् पुनर्नक्षत्राजस्य राजयक्षमेति ॥११॥

tasmin hi daksādhvaradhvarṁsē dēhināṁ nānādiksu  
 vidravatāmabhidravaṇataraṇadhaṁvanaplaṁvanalaṅghanādyairdeḥavikṣōbhāṇaiḥ purā  
 gulmōtpattirabhūt, haviṣprāśāt pramēhakuṣṭhānāṁ, bhayatrāsaśōkairunmādānāṁ,  
 vividhabhūtāśucisāṁsparśādaṁpasmārāṇāṁ, jvarastu khalu mahēśvaralalāṭaprabhavaḥ ,  
 tatsantāpādraktaṁpittam, ativyavāyāt punarnakṣatrājasya rājayakṣmēti||11||

tasmin hi dakShAdhvaradhvaMse dehinAM  
 nAnAdikShuvidravatAmabhidravaNataraNadhAvanaplavanala~gghanAdyairdehavikSho  
 bhaNaiH purAgulmotpattirabhUt, haviShprAshAt pramehakuShThAnAM,  
 bhayatrAsashokairunmAdAnAM,vividhabhUtAshucisaMsparsAdapasmArANAM,  
 jvarastu khalu maheshvaralalATaprabhavaH ,tatsantApAdraktaṁpittam, ativyavAyAt  
 punarnakShatrarAjasya rAjayakShmeti||11||

As per vedic legends, in the aftermath of destruction of Daksha's *yajna* (holy sacrifice), *gulma* (disease similar to lumps in abdomen) was manifested first in human beings due to stress induced as a result of fleeing, swimming, running, flying, etc. in all directions. *Prameha* (disease of obstinate urinary disorders) and *kushtha* (obstinate skin diseases including leprosy) were manifested due to excess intake of ghee. Various types of *unmada* (insanity/psychosis) were manifested due to fear, apprehension and grief. *apasmara* (epilepsy) set in due to coming in contact with various types of unclean objects. *Jwara*" came out of the forehead of Lord Shiva, *andraktapitta* was manifested (a condition characterized by bleeding from different parts of the body) due to *jwara*'s heat. *Moon was afflicted with rajayakshma*" due to excessive sexual indulgence. [11]

## Summary

**भवन्ति चात्र-**

अपस्मारो हि वातेन पितेन च कफेन च |

चतुर्थः सन्निपातेन प्रत्याख्येयस्तथाविधः ||१२||

साध्यांस्तु भिषजः प्राज्ञः साध्यन्ति समाहिताः |

तीक्ष्णैः संशोधनैश्चैव यथास्वं शमनैरपि ||१३||

यदा दोषनिमित्स्य भवत्यागन्तुरन्वयः |

तदा साधारणं कर्म प्रवदन्ति भिषग्विदः ||१४||

**bhavanti cātra-**

apasmārō hi vātēna pittēna ca kaphēna ca|

caturthaḥ sannipātēna pratyākhyēyastathāvidhaḥ||12||

sādhyāṁstu bhiṣajah prājñāḥ sādhayanti samāhitāḥ|

tīkṣṇaiḥ saṁśōdhanaiścaiva yathāsvaṁ śamanairapi||13||

yadā dōśanimittasya bhavatyāganturanvayah|  
 tadā sādhāraṇam karma pravadanti bhiṣagvidah||14||  
 bhavanti cAtra- apasmAro hi vAtena pittena ca kaphena ca|  
 caturthaH sannipAtena pratyAkhyeyastathAvidhaH||12||  
 sAdhyAMstu bhiShajaH prAj~jAH sAdhayanti samAhitAH|  
 tlkShNaiH saMshodhanaishcaiva yathAsvaM shamanairapi||13||  
 yadA doShanmittasya bhavatyAganturanvayaH|  
 tadA sAdhAraNaM karma pravadanti bhiShagvidaH||14||

From the preceding verses, it can be said that apasmara manifests itself due to the vitiation of *vata*, *pitta* and *kapha* and *sannipata* (combined vitiation of all the three *doshas*). The *sannipata* variation is incurable. [12]

The curable types of apasmara should be carefully treated by a physician possessing extensive knowledge and experience of administering elimination and alleviation therapies associated with the *dosha*(s) causing the specific variant of apasmara. [13]

When apasmara is caused by the vitiation of *doshas* associated with extrinsic causative factors, then general therapies addressing both (*doshic* equilibrium and extrinsic causes) are advised by the best of physicians. [14]

सर्वरोगविशेषज्ञः सर्वाषधविशारदः।  
 भिषक् सर्वामयान् हन्ति न च मोहं निगच्छति ॥१५॥  
 sarvarōgaviśēṣajñāḥ sarvauṣadhaviśāradah|  
 bhiṣak sarvāmayān hanti na ca mōham nigacchatati ||15||  
 sarvarogavisheShaj~jaH sarvauShadhavishAradaH|  
 bhiShak sarvAmayAn hanti na ca mohaM nigacchatati ||15||

An able physician, well versed in the specific characteristics of all diseases and the properties of all medicines, cures all (curable) diseases and does not get confused. [15]

इत्येतदखिलेनोक्तं निदानस्थानमुत्तमम् ।१६।  
 ityētadakhilēnōktam̄ nidānasthānamuttamam|16|  
 ityetadakhilenoktaM nidAnasthAnamuttamam|16|

This concludes the (excellent section titled) Nidana Sthana. [16]

## Diagnostic principles of diseases

*Nidanarthakara roga (disease specific causes)*

निदानार्थकरो रोगो रोगस्याप्युपलभ्यते ||१६||

nidānārthakarō rōgō rōgasyāpyupalabhyatē||16||

nidAnArthakaro rogo rogasyApyupalabhyate||16||

Diseases can act as causative factors of other diseases as well [16]

तद्यथा-

ज्वरसन्तापाद्रक्तपितमुदीर्यते ।

रक्तपिताज्ज्वरस्ताभ्यां शोषश्चाप्युपजायते ||१७||

tadyathā-

jvarasantāpādraktapittamudīryatē|

raktapittājjvarastābhyaṁ śōṣaścāpyupajāyatē ||17||

tadyathā -

jvarasantApAdraktapittamudIryate|

raktapittAjjvarastAbhyAM shoShashcApyupajAyate ||17||

For example, elevated temperature in *jwara* can cause *raktapitta* and *raktapitta* can cause *jwara*. Both the diseases (i.e *jwara* and *raktapitta*) may lead to *shosha* (depletion of *dhatus*). [17]

प्लीहाभिवृद्ध्या जठरं जठराच्छोथ एव च ।

अर्शोभ्यो जठरं दुःखं गुल्मश्चाप्युपजायते ||१८||

plīhābhivṛddhyā jaṭharāṁ jaṭharācchōtha ēva ca|

arśobhyo jaṭharāṁ duḥkham gulmaścāpyupajāyatē||18||

pllhbhivRuddhyA jaTharaM jaTharAcchotha eva ca|

arshobhyo jaTharaM duHkhaM gulmashcApyupajAyate||18||

*Pleeha* (enlargement of spleen) causes *jathara* (abdominal diseases including ascitis), which leads to *shotha* (generalized edema). *Arsha* (hemorrhoids) causes *jathara* (abdominal diseases including ascitis) that leads to *gulma* (abdominal lumps). [18]

प्रतिश्यायाद्भवेत् कासः कासात् सञ्जायते क्षयः ।

क्षयो रोगस्य हेतुत्वे शोषश्चाप्युपलभ्यते ||१९||

pratiśyāyādbhavēt kāsaḥ kāsāt sañjāyatē kṣayahḥ  
 kṣayō rōgasya hētutvē śōśasyāpyupalabhyatē||19||  
 pratishyAyAdbhavet kAsaH kAsAt sa~jjAyate kShayaH|  
 kShayo rogasya hetutve shoShasyApyupalabhyate||19||

*Pratishyaya* (rhinitis) leads to *kasa* (cough) which further leads to *kshaya* (depletion of *dhatu*), consequently resulting in *sosha* (emaciation). [19]

ते पूर्वं केवला रोगः पश्चाद्धेत्वर्थकारिणः ।  
 उभयार्थकरा दृष्टास्तथैवैकार्थकारिणः [१] ||२०||  
 tē pūrvam̄ kēvalā rōgāḥ paścāddhētvartakāriṇāḥ|  
 ubhayārthakarā dṛṣṭāstathaivaikārthakāriṇāḥ [1] ||20||  
 te pUrvaM kevalA rogAH pashcAddhetvarthakAriNaH|  
 ubhayArthakarA dRuShTAstathaivaikArthakAriNaH ||20||

Conditions in their primary stages or forms manifest themselves as diseases and subsequently act as causative factors for other diseases. They thus play a dual role - as a disease and as a causative factor. Some of these play just one role as well– either as a disease or as a causative factor. [20]

कश्चिद्दधि रोगो रोगस्य हेतुभूत्वा प्रशाम्यति ।  
 न प्रशाम्यति चाप्यन्यो हेत्वर्थं कुरुतेऽपि च ||२१||  
 kaścidḍhi rōgō rōgasya hēturbhūtvā praśāmyati|  
 na praśāmyati cāpyanyō hētvartham̄ kurutē'pi ca||21||  
 kashciddhi rogo rogasya heturbhUtvA prashAmyati|  
 na prashAmyati cApyanyo hetvarthaM kurute~api ca ||21||

Some diseases subside after causing another disease, while some do not subside even after causing another disease. [21]

एवं कृच्छ्रतमा नृणां दश्यन्ते व्याधिसङ्कराः ।  
 प्रयोगापरिशुद्धत्वात्था चान्योन्यसम्भवात् ||२२||  
 ēvaṁ kṛcchratamā nṛṇāṁ dṛśyantē vyādhisaṅkarāḥ|  
 prayōgāpariśuddhatvāttathā cānyōnyasambhavāt||22||  
 evaM kRucchratamA nRUNAM dRushyante vyAdhisA~gkarAH|

prayogAparishuddhatvAttathA cAnyonyasambhavAt||22||

Combinations of diseases in human beings are usually very difficult to treat, owing to the complexity of the line of treatment, and their serving as causative factors of each other. [22]

*Ideal therapy without adverse effects*

प्रयोगः शमयेदव्याधिं योऽन्यमन्यमुदीरयेत् ।

नासौ विशुद्धः, शुद्धस्तु शमयेद्यो न कोपयेत् ॥२३॥

prayogaḥ śamayēdvyaḍhim yō'nyamanyamudīrayēt|

nāsau viśuddhaḥ, śuddhastu śamayēdyō na kōpayēt||23||

prayogaH shamayedvyAdhiM yo~anyamanyamudIrayet|

nAsau vishuddhaH, shuddhastu shamayedyo na kopayet||23||

A therapy that alleviates one disease condition but provokes another disease is not *shuddha* (or is an impure or incorrect therapy). The ideal therapy is that which pacifies a disease without provoking any other disease. [23]

*Diagnostic aspect of etiological factors*

एको हेतुरनेकस्य तथैकस्यैक एव हि ।

व्याधेरेकस्य चानेको बहूनां बहवोऽपि च ॥२४॥

ēkō hēturanēkasya tathaikasyaika ēva hi|

vyādhērēkasya cānēkō bahūnāṁ bahavō'pi ca||24||

eko heturanekasya tathaikasyaika eva hi|

vyAdherekasya cAneko bahUnAM bahavo~api ca||24||

One causative factor may cause one or many diseases. Many causative factors may result in a single disease or may cause several diseases. [24]

ज्वरभ्रमप्रलापाद्या दश्यन्ते रुक्षहेतुजाः ।

रुक्षेणैकेन चाप्येको ज्वर एवोपजायते ॥२५॥

jvarabhr̥mapralāpādyā dṛśyantē rūkṣahētujāḥ|

rūkṣēṇaikēna cāpyēkō jvara ēvōpajāyatē||25||

jvarabhr̥mapralApAdyA dRushyante rUkShahetujAH|

rUkSheNaikena cApyeko jvara evopajAyate||25||

It is seen that a single causative factor, ruksha (dry) can cause many diseases such as *jwara* (fever), *bhrama* (vertigo) and *pralapa* (delirium) etc., while the same single factor (*ruksha*) may cause just one disease (*jwara*) [25]

हेतुभिर्बहुभिर्चैको ज्वरो रूक्षादिभिर्भवेत् ।  
रूक्षादिभिर्ज्वराद्याश्च व्याधयः सम्भवन्ति हि ॥२६॥

hētubhirbahubhiścaikō jvarō rūkṣādibhirbhavēt|  
rūkṣādibhirjvarādyāśca vyādhayaḥ sambhavanti hi||26||

hetubhirbahubhishcaiko jvaro rUkShAdibhirbhavet|  
rUkShAdibhirjvarAdyAshca vyAdhayaH sambhavanti hi||26||

*Jwara* alone may be caused by a combination of several causative factors including but not limited to *ruksha*(dry) etc. and many causes like, *ruksha* (dry, rough) etc. may lead to several diseases. [26]

#### *Diagnostic aspect of symptoms*

लिङ्गं चैकमनेकस्य तथैवैकस्य लक्ष्यते ।  
बहून्येकस्य च व्याधेर्बहूनां स्युर्बहूनि च ॥२७॥

liṅgam caikamanēkasya tathaivaikasya lakṣyatē|  
bahūnyēkasya ca vyādhērbahūnāṁ syurbahūni ca||27||

li~ggaM caikamanekasya tathaivaikasya lakShyate|  
bahUnyekasya ca vyAdherbahUnAM syurbahUni ca||27||

Similarly, one symptom may be common to many diseases, one symptom may be related to only one disease, many symptoms may be associated with only one disease, and many symptoms may be common to many diseases. [27]

विषमारम्भमूलानां लिङ्गमेकं ज्वरो मतः ।  
ज्वरस्यैकस्य चाप्येकः सन्तापो लिङ्गमुच्यते ॥२८॥

viṣamārambhamūlānāṁ liṅgamēkam jvarō mataḥ|  
jvarasyaikasya cāpyēkah̄ santāpō liṅgamucyatē||28||

viShamArambhamUIAnAM li~ggamekaM jvaro mataH|  
jvarasyaikasya cApyekaH santApo li~ggamucyate||28||

One symptom i.e. *jwara* can be considered common to many diseases that have irregular onset, while *santapa* (elevated temperature) is considered a symptom of only one disease i.e. *jwara*.[28]

विषमारम्भमूलैश्च ज्वर एको निरुच्यते ।  
 लिङ्गैरेतैजर्वरश्वासहिक्काद्याः सन्ति चामयाः ||२९||  
 viṣamārambhamūlaiśca jvara ēkō nirucyatē|  
 liṅgairētairjvaraśvāsahikkādyāḥ santi cāmayāḥ||२९||  
 viShamArambhamUlaishca jvara eko nirucyate|  
 li~ggairetairjvarashvAsahikkAdyAH santi cAmayAH||२९||

Irregular onset (and similar other symptoms) appear in the case of *jwara*, while similar symptoms also occur in *shwasa* (dyspnea), *hikka* (hiccups), and other similar diseases. [29]

#### *Therapeutic considerations*

एका शान्तिरनेकस्य तथैवैकस्य लक्ष्यते ।  
 व्याधैरेकस्य चानेका बहूनां बहृव्य एव च ||३०||  
 ēkā śāntiranēkasya tathaivaikasya lakṣyatē|  
 vyādhērēkasya cānēkā bahūnāṁ bahvya ēva ca||३०||  
 ekA shAntiranekasya tathaivaikasya lakShyate|  
 vyAdherekasya cAnekA bahUnAM bahvya eva ca||३०||

A single therapy can subside many diseases as well as a single disease. Multiple therapies may be needed to subside many diseases, whereas one disease could require multiple therapies to cure. [30]

शान्तिरामाशयोत्थानां व्याधीनां लङ्घनक्रिया ।  
 ज्वरस्थैकस्य चाप्येका शान्तिर्लङ्घनमुच्यते ||३१||  
 śāntirāmāśayotthānāṁ vyādhīnāṁ laṅghanakriyā|  
 jvarasyaikasya cāpyēkā śāntirlaṅghanamucyatē||३१||  
 shAntirAmAshayotthAnAM vyAdhInAM la~gghanakriyA|  
 jvarasyaikasya cApyekA shAntirla~gghanamucyate||३१||

The diseases originating from *amashaya* are cured by *langhana* (fasting), only whereas only a single disease entity *jwara* also can be treated by the single therapy of *langhana* (fasting). [31]

तथा लघ्वशनाद्याश्च ज्वरस्थैकस्य शान्तयः ।  
 एताश्चैव ज्वरश्वासहिक्कादीनां प्रशान्तयः ||३२||

tathā laghvaśanādyāśca jvarasyaikasya śāntayah|  
 ētāścaiva jvaraśvāsahikkādīnāṁ praśāntayah||32||  
 tathA laghvashanAdyAshca jvarasyaikasya shAntayaH|  
 etAshcaiva jvarashvAsahikkAdInAM prashAntayaH||32||

For treating a single disease like *jwara*, multiple therapies like light diet, etc. are needed and the same multiple therapies like light diet etc. are needed to subside many diseases like *jwara*(fever), *shwasa*(dyspnea), *hikka*(hiccups) etc. [32]

#### *Prognostic aspect in therapy*

सुखसाध्यः सुखोपायः कालेनाल्पेन साध्यते ।  
 साध्यते कृच्छ्रसाध्यस्तु यत्नेन महता चिरात् ||33||  
 याति नाशेषतां व्याधिरसाध्यो याप्यसञ्जितः ।  
 परोऽसाध्यः क्रियाः सर्वाः प्रत्याख्येयोऽतिवर्तते ||34||  
 नासाध्यः साध्यतां याति साध्यो याति त्वसाध्यताम् ।  
 पादापचाराद्दैवाद्वा यान्ति भावान्तरं गदाः ||35||  
 sukhasādhyah sukhōpāyah kälēnālpēna sādhyatē|  
 sādhyatē kṛcchrasādhyastu yatnēna mahatā cirāt||33||  
 yāti nāsēsatām vyādhirasādhyō yāpyasañjñitah|  
 paro'sādhyah kriyāḥ sarvāḥ pratyākhyēyō'tivartatē||34||  
 nāsādhyah sādhyatām yāti sādhyō yāti tvasādhyatām|  
 pādāpacārāddaiवाद्वा yānti bhāvāntaram gadāḥ||35||  
 sukhasAdhyaH sukhopAyaH kAlenAlpena sAdhyate|  
 sAdhyate kRucchrasAdhyastu yatnena mahatA cirAt||33||  
 yAti nAsheShatAM vyAdhirusAdhyo yApyasa\_jitaH|  
 paro~asAdhyaH kriyAH sarvAH pratyAkhyeyo~ativartate||34||  
 nAsAdhyaH sAdhyatAM yAti sAdhyo yAti tvasAdhyatAm|  
 pAdApacArAddaivAdvA yAnti bhAvAntaraM gadAH||35||

Easily curable diseases can be managed in a short time by simple measures. Diseases which are difficult to cure may require more effort and time to cure. The palliable variety

of incurable diseases can never be cured, but can be alleviated. Incurable diseases are not amenable to any type of treatment.

Conversely, incurable diseases never become curable, while the curable varieties may become incurable due to factors like incompetence of the four components of health management (the physician, the medicine, the attendant and the patient) and/or misfortune. The easily curable kinds may also become difficult to cure, if not incurable, while diseases that are difficult to cure may become palliable and palliable variety may become incurable. [33-35]

#### *Examination of stages of disease*

वृद्धिस्थानक्षयावस्थां रोगाणामुपलक्षयेत् ।

सुसूक्ष्मामपि च प्राज्ञो देहाग्निबलचेतसाम् ॥३६॥

vṛddhisthānakṣayāvasthāṁ rōgāṇāmupalakṣayēt |

susūkṣmāmapi ca prājñō dēhāgnibalacētasām||36||

vRuddhisthAnakShayAvasthAM rogANAmpalakShayet |

susUkShmAmapi ca prAj~jo dehAgnibalacetAsAm||36||

A wise physician should carefully observe the subtle changes in the state of diseases (aggravated, normal and diminished) while properly assessing the patient's body strength, digestive power and mental ability. [36]

व्याध्यवस्थाविशेषान् हि जात्वा जात्वा विचक्षणः ।

तस्यां तस्यामवस्थायां चतुःश्रेयः प्रपद्यते ॥३७॥

vyādhyavasthāviśeṣān hi jñātvā jñātvā vicakṣaṇaḥ|

tasyāṁ tasyāmavasthāyāṁ catuhśrēyah prapadyatē||37||

vyAdhyavasthAvisheShAn hi j~jAtvA j~jAtvA vicakShaNaH|

tasyAM tasyAmavasthAyAM catuHshreyaH prapadyate||37||

The physician, who is keenly observing variations in disease stages in the patient, should know it (the disease) well and prescribe such a treatment that would be helpful in attaining the fourfold effect of therapeutics. [37]

प्रायस्तिर्यग्गता दोषाः क्लेशयन्त्यातुरांश्चिरम् ।

तेषु न त्वरया कुर्याद्देहाग्निबलवित् क्रियाम् ॥३८॥

प्रयोगैः क्षपयेद् वा तान् सुखं वा कोष्ठमानयेत् ।

जात्वा कोष्ठप्रपन्नांस्तान् यथासन्नं हरेटबुधः ॥३९॥

prāyastiryaggatā dōśāḥ klēśayantyāturāṁściram|  
 tēṣu na tvarayā kuryāddēhāgnibalavit kriyām||38||  
 prayogaiḥ kṣapayēdvā tān sukham vā kōṣṭhamānayēt|  
 jñātvā kōṣṭhaprapannāṁstān yathāsannam harēdbudhah||39||  
 prAyastiryaggatA doShAH kleshayantyAturAMshciram|  
 teShu na tvarayA kuryAddehAgnibalavit kriyAm||38||  
 prayogaiH kShapayedvA tAn sukhAM vA koShThamAnayet|  
 j~jAtvA koShThaprapannAMstAn yathAsannaM haredbudhaH||39||

Generally, *doshas* that are spread over obliquely (in the transverse direction) afflict the patient for a longer time. In that condition, treatment should not be initiated in a hurry without proper assessment of body strength and digestive power. These *doshas* should be alleviated first by treatment, or they should be carefully be drawn to the *koshtha* (bowel). After knowing their status in *koshtha*, the wise physician should eliminate them through the nearest route. [38-39]

जानार्थं यानि चोक्तानि व्याधिलिङ्गानि सङ्ग्रहे ।  
 व्याधयस्ते तदात्वे तु लिङ्गानीष्टानि नामयाः ||४०||  
 jñānārtham yāni cōktāni vyādhiliṅgāni saṅgrahē|  
 vyādhayastē tadātvē tu liṅgānīṣṭāni nāmayāḥ||40||  
 j~jAnArthaM yAni coktAni vyAdhili~ggAni sa~ggrahe|  
 vyAdhayaste tadAtve tu li~ggAnIShTAni nAmayAH||40||

In the Nidana Sthana, a compendium of symptomatology has been provided as a reckoner for the Ayurveda practitioner to gain adequate knowledge of some of the major classes of diseases and diagnose them effectively. But these symptoms may independently develop into diseases and create emergency situations. [40]

विकारः प्रकृतिश्चैव द्वयं सर्वं समासतः ।  
 तद्धेतुवशं हेतोरभावान्नानुवर्तते ||४१||  
 vikāraḥ prakṛtiścaiva dvayaṁ sarvam samāsataḥ|  
 taddhētuvaśagam hētōrabhāvānnānuvartatē||41||  
 vikAraH prakRutishcaiva dvayaM sarvaM samAsataH|  
 taddhetuvashagaM hetorabhAvAnnAnuvartate||41||

Everything can be categorized into being in a normal or an abnormal state. Both of these categories depend upon causes. Nothing can happen without a cause. [41]

## Summary

तत्र श्लोकाः-

हेतवः पूर्वरूपाणि रूपाण्युपशयस्तथा ।  
सम्प्राप्तिः पूर्वमुत्पत्तिः सूत्रमात्रं चिकित्सितात् ॥४२॥  
ज्वरादीनां विकाराणामष्टानां साध्यता न च ।  
पृथगेकैकशश्चोक्ता हेतुलिङ्गोपशान्तयः ॥४३॥  
हेतुपर्यायनामानि व्याधीनां लक्षणस्य च ।  
निदानस्थानमेतावत् सङ्ग्रहेणोपदिश्यते ॥४४॥

tatra ślōkāḥ-

hētavah pūrvarūpāṇi rūpāṇyupaśayastathā|  
samprāptih pūrvamutpattiḥ sūtramātrāṁ cikitsitāt||42||  
jvarādīnāṁ vikārāṇāmaṣṭānāṁ sādhyatā na ca|  
pṛthagēkaikaśaścōktā hētuliṅgōpaśāntayah||43||  
hētuparyāyanāmāni vyādhīnāṁ lakṣaṇasya ca|  
nidānasthānamētāvat saṅgrahēṇōpadiśyatē||44||

tatra shlokAH-

hetavaH pUrvarUpANi rUpANyupashayastathA|  
samprAptiH pUrvamutpattiH sUtramAtraM cikitsitAt||42||  
jvarAdInAM vikArANAmaShTAnAM sAdhyatA na ca|  
pRuthagekaikashashcoktA hetuli~ggopashAntayaH||43||  
hetuparyAyanAmAni vyAdhInAM lakShaNasya ca|  
nidAnasthAnametAvat sa~ggraheNopadishyate||44||

To sum up this chapter, etiological factors, premonitory symptoms, signs and symptoms, therapeutic relief, pathogenesis, historical origins and brief line of treatment of apasmara have been described in this section. Since this is the concluding chapter of the Nidana Sthana, a summary to the entire section has also been provided here, stating that starting from *jwara* all eight diseases have been dealt with separately in

eight chapters, each with etiological factors, symptomatology, prognosis and brief line of management.

A compendium of diseases with etiological factors, their synonyms, symptoms of the diseases have been provided as an epilogue to the chapter. [42-44]

इत्यग्निवेशकृते तन्त्रे चरकप्रतिसंस्कृते निदानस्थाने अपस्मारनिदानं नामाष्टमोऽध्यायः ।

निदानस्थानं समाप्तम् ॥८॥

ityagnivēśakṛtē tantrē carakapratisaṁskṛtē nidānasthānē

apasmāranidānam nāmāṣṭamō'dhyāyah||8||

iti carakasaṁhitāyām dvitīyām nidānasthānam samāptam|

Thus, ends the eighth chapter on the 'diagnosis of apasmara' of the section "Diagnosis of diseases" (Nidana Sthana) of Agnivesha , as redacted by Charak.

## Tattva Vimarsha (Fundamental Principles)

- Apasmara is a disease due to vitiation of three *sharira doshas* and two *manas doshas*.
- The causative factors of apasmara mainly include consuming unhygienic, impure, decomposed food and encountering inauspicious things that are not compatible with one's sensibilities.
- Diet is important for sustaining physical and psychological health. Improper dietary habits can lead to various psychosomatic disorders associated with apasmara.
- Apasmara originates from the heart, which is the center of consciousness and emotions per Vedic texts. The clinical presentation includes impaired heart-brain coordination leading to transient loss of memory, erratic movements, and blackouts. Analysis of the heart-brain connection is very important in the pathology of apasmara.
- *Psychological* stressors like excessive passion, anger, fear, greed, attachment, excitement, grief, anxiety, worry, perturbation etc. precipitate episodes of apasmara in a person afflicted with excessively aggravated *dosha*.
- apasmara, depending upon the predominant *dosha*, can be diagnosed on the basis of frequency of episodes, duration of loss of consciousness, pattern of abnormal movements, and types of objects perceived (in aura phase) prior to the occurrence of an actual episode.
- Purification therapies using strong medicines, observing a healthy diet and lifestyle are considered the primary forms of treatment of apasmara.  
Non-pharmacological measures like *mantra* (holy chants) and *sattvavajaya chikitsa* (mind training for restraint, such as cognitive behavior therapy) aid in the treatment of apasmara.

- There can be one causative factor for many diseases or multiple causative factors for single disease.
- Similarly one symptom can be common in many diseases and one symptom can be seen in a single disease alone.
- There could be a single treatment for many diseases or many treatments for a single disease.
- The duration of treatment depends upon prognosis of the disease. A disease at the onset may be curable but if not treated, could worsen into a palliable or incurable variant.
- The subtle changes in *dosha*, and the three states of a disease (aggravated, normal, or diminished) should be carefully observed along with proper assessment of body strength, digestive power and mental ability .
- The *doshas* that spread obliquely (in the transverse direction) afflict patient for a longer time. These *doshas* should be managed first, or they should be carefully drawn to *koshtha* (bowel) by proper measures. After analyzing them in *koshtha*, the physician should eliminate them through the nearest route.

## Vidhi Vimarsha (Applied Inferences)

The chapter on apasmara is sequenced after the one on unmada. The sequence is due to similarities of clinical origin as well as causative and pathophysiological factors, since both diseases are psychosomatic in nature.

### History and origin of the disease in ancient medical literature

The origin of various diseases is narrated in the eleventh verse of the chapter. apasmara originates from physical and mental contact with various unclean and unwholesome exogenous factors leading to imbalance at physical and psychological levels. The words *ashuchi samsparsa* literally mean direct contact of body and mind with unwholesome things. This is further supported by apasmara's etiology which points at improper diet and lifestyle as a major causative factor.

Review of ancient medical literature confirms that epilepsy was initially called sacred, because of the belief for its divine origin<sup>360</sup>. A chapter on epilepsy in Babylonian texts on medicine comprising 40 tablets dating as far back as 1067 BC accurately recorded many of the different seizure types recognized today. It emphasizes upon the supernatural nature of epilepsy, with each seizure type associated with a divinity, spirit or deity (usually evil)<sup>361</sup>. It was believed, in antiquity, that if a person comes in contact

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<sup>360</sup> Emmanouil Magiorkinis, Kalliopi Sidiropoulou Aristidis Diamantis. Hallmarks in the History of Epilepsy: From Antiquity Till the Twentieth Century. Novel Aspects on Epilepsy Office for the Study of History of Hellenic Naval Medicine, Naval Hospital of Athens, Greece.

<sup>361</sup> J. M. S. Pierce, a disease once sacred. A history of the medical understanding of epilepsy By Mervyn J. Eadie and Peter F. Bladin2001. Eastleigh: John Libbey. Pp. 248.

with things that are supernatural and evil, he/she would suffer from epilepsy. This view is consistent with those in ancient Greek, British, and Indian (Vedic) literature as well. The Ayurvedic theory of origin of epilepsy mentions contact with evil, unwholesome and unclean objects or experiences as key causative factors. References of *grahas* (celestial bodies) as a causative factor of apasmara, specifically in children, can be found in vedic texts with terms such as 'skanda' and 'skandapasmara'. Though there are references of exogenous variants of epilepsy (*agantu apasmara*) in Charak Samhita, a detailed description of these is not found. This indicates two things:

1. Epilepsy originates from exposure to unwholesome, unclean and evil things either at a physical or at a psycho-spiritual plane.
2. Management of the disease may include *adhyatmik chikitsa* (psycho-spiritual therapy) for better treatment.

### Definition of apasmara

apasmara is defined as the occasional loss of consciousness due to deterioration of *smriti* (memory), *buddhi* (intellect) and *sattva* (mind), characterized by *tamahpravesha* (entering darkness/ blackouts) and *bibhatsa cheshta* (abnormal movements).

As explained by Sushruta, *smriti* in context of apasmara is *bhutartha vijnana* i.e. orientation of external world and consciousness. *Dhi-buddhi* (intellect) is *karya-akarya vibhaga karini* i.e. discriminating power between right and wrong. *Sattva* is referred as *manas* (mind) and *dhairyta* (temperance, patience). A patient of apasmara suffers from deterioration of all these three important mental faculties (*dhi*, *buddhi* and *smriti*).

The first cardinal sign of this deterioration is *tamapravesha*, i.e., *jnana abhava* or loss of knowledge and the ability to acquire new knowledge. The second cardinal sign, *bibhatsa cheshta*, indicates involuntary movements of body due to lack of brain's control or improper coordination. Sushruta narrated that due to these features of apasmara, the disease often leads to death (*antakrita*). Dallhana comments that the dreadfulness of this disease is due to the fact that an afflicted person may fall into water or fire due to lack of orientation.

### Impairment of knowledge and coordination

500px|Fig. 1: Faculty involved in attainment of knowledge|thumb

According to Ayurveda, knowledge of external objects is processed through sense organs , to the mind-intellect, culminating in the spirit. This chain or sequence for attainment of knowledge is important for proper functioning of memory (encoding, storage and retrieval) and intellect (cognition) [Fig.1]. Occasional impairment of coordination in the sequence consisting of sense organs-intellect-mind-spirit is seen in

apasmara. This may lead to decrease in cognitive performance of an individual.[Fig. 1: Faculty involved in attainment of knowledge]

In conventional medicine, three major factors that cause disturbance in cerebral neurotransmission leading to blackouts and epilepsy viz. hypo-perfusion, hypo-metabolism, and hypoxia have been described in relevant medical texts. These disturbances lead to abnormal discharges, improper signal transduction in the neurotransmitter channels, and seizures. As a consequence, cellular dysfunctions in the brain, disruptions of the memory mechanism, and disturbed coordination of movements may occur causing the clinical manifestation of apasmara. The role of these three factors and its impact on memory and cellular dysfunction in the pathogenesis of epilepsy need to be elucidated. The three pathological effects are comparable to the changes created by vitiation of *kapha*, *pitta* and *vata*. Differentiation between these three types of manifestations is described further.

Per Ayurveda, *smriti* is *atmaja* (originated from the soul) and *sattvaja* (originated from the mind). This means that *smriti* (memory) of a person is essentially related with soul and mind. The Bhagavad Gita describes the consequences of excessive indulgence in sensory activities leading to excessive affliction resulting in an increase in passion, then anger, and then lack of knowledge. This further leads to deterioration of *smriti* and then affecting the intellect. This sequence lays the ground for apasmara.

### *Tattva Sara*

Three factors of mind, memory, intellect and consciousness are impaired in apasmara. Due care should be taken to protect and manage these three. Herbs like *medhya rasayana* and treatment modalities like *sattvajaya chikitsa* are known to promote activities of mind, intellect and consciousness.

### Predisposing factors for apasmara

The susceptible individuals and conditions for epilepsy are described in detail:

#### *Rajas–tamas affliction*

The first factor, *rajas - tamas* affliction, signifies the role of mind in etio-pathology of apasmara. *Rajas* is a *guna* (tendency or attribute) responsible for the initiation of every kind of activity and symbolizes energy, while *Tamas* is the *guna* symbolizing inertia, dulling or stopping of activities. These two play an important role in the coordination of activities within the sequence of sense organs-mind-intellect-spirit, in the attainment of knowledge as well as to maintain the orientation of external world (consciousness). A *rajas-tamas* affliction, therefore, adversely impacts coordination of activities and perverts the mind and intellect, landing the patient into loss of orientation and consciousness. A “distressed” state of mind, caused by *rajas-tamas* affliction, is an important etiological factor responsible for various psychosomatic disorders such as epilepsy. Therefore, rehabilitating the *rajas - tamas* balance (and thus, achieving harmony between all the three *gunas*) is of utmost importance in preventing the

pathology and maintenance of health. Neurologically, initiation of action through neurotransmitters such as acetylcholine, while inhibition of action through dopamine can be categorized under *rajas* and *tamas* respectively. Synchronization of discharges in the cerebral region is a result of *rajas-tamas* balance. Disturbance in this *rajas-tamas* balance and depletion of *sattva* leads to hypersynchronization, resulting in seizures. Threshold of neuronal activity is due to balance between *sattva*, *rajas* and *tamas*. It is *sattva* that maintains the normal threshold of neuronal activities. Decreased *sattva* and/or increased *rajas* and *tamas* can alter the threshold of neurons.

The state of mind afflicted due to *rajas* and *tamas* can be considered as 'distressed mind' observed as important causative factor for various psycho somatic disorders like epilepsy.

#### *Sharira dosha vitiation*

The second important factor is imbalance of *doshas* at the somatic level. There are three terms used to indicate the state of *doshas* which predisposes apasmara:

- First is *udbhhranta* (moving upwards in vitiated state). The upward direction of flow of *doshas* may indicate the pathway of apasmara from the heart to the brain. The pathology starts from the abode of consciousness i.e. heart, spreading upwards afflicting sense organs. In Chikitsa Sthana, the term *vibhranta* is used to denote this condition.
- The second state is *vishama*, meaning a state of disequilibrium. Imbalanced *doshas* create a favorable environment for apasmara. \*The third state is *bahu* (excessive), meaning that the imbalance is excessive enough to affect the brain-mind system. This suggests that the *doshas* are in an aggravated state of imbalance and predispose to the disease. The condition also points towards manifestation of apasmara as a result of other somatic disease pathologies.

The disease condition is a result of combination of the above states of *doshas* with the *rajas-tamas* affliction. These are *sanchaya* (accumulation), *prakopa* (aggravation) and *prasara* (spread) stages of the disease - important somatic factors for causation of apasmara.

The cumulative presentation suggests the psychosomatic nature of the disease where the psyche and soma are equally involved in the pathogenesis. This is important while treating apasmara, because this indicates that only administering anti-epileptic drugs is not enough in treating apasmara. The treatment of underlying psychological factors shall also be given due emphasis.

#### *Role of diet*

The third key factor is the role of quality of diet in the causation of the disease. Charak uses terms like *samala* (impure), *vikrita* (deformed/ altered), *upahita* (mixed), and *ashuchi* (unclean/unhygienic) as adjectives to describe food articles that cause apasmara. Sushruta uses terms like *viruddha* (incompatible or of

contradictory/antagonistic nature) and *malina* (bad) for the same factors. Besides providing nutrition to the body, diet plays a great impact on the mind as well. It is mentioned in the texts that the nutrition of soma and psyche occurs through food and food habits. Yogic texts narrate the role of food in nourishing five sheaths of the body, called *annamaya kosha*, *pranamaya kosha*, *vijnanamaya kosha*, *manomaya kosha* and *anandmaya kosha*. Therefore, diet is not only important for proper functioning of the three *doshas*, but also for nourishment of the mind and the soul. Charak as well as Sushruta have acknowledged the role of unclean, unhygienic, unwholesome, incompatible diet in the causation of apasmara. Dallhana commented that this includes the diet that is *dvishta* (disliked by mind or taken with hatred feeling), *amedhya* (not satisfying mind) and *paryushita* (stale). All these types of diet can cause disturbance in the body and mind. As per conventional medicine, a diet that is deficient in certain vitamins and minerals and that which increases neurotoxins may lead to neurological disorders. Therefore, biochemical changes in the above mentioned causative foods may lead to deficiencies of important nutrients and cause increase in neurotoxins resulting in apasmara like disorders. Moreover, some gastrointestinal symptoms have been described further as premonitory symptoms of apasmara. The role of diet and food habits as a cause of apasmara needs to be further researched. These factors are to be avoided during the treatment of apasmara. Not following /proper dietary rules is one of the key causes for the formation of *ama*. *Ama* produces free radicals leading to excessive oxidative stress and tissue injuries. Therefore, following proper dietary habits is important in preventing the pathogenesis of the disease. Furthermore, this suggests the possibility of food contamination as a causative factor for epilepsy. A case of endrin-laced taquitos causing seizures in the US is an example of food contamination causing epileptic seizures.<sup>362</sup>

#### *Improper methods – lifestyle factors*

The fourth etiological factor of epilepsy is not following the prescribed rules of diet and lifestyle. The *upayoga vidhi* lists improper dietary habits, lifestyle and code of conduct that lead to disturbances in soma and psyche. Sushruta has elaborated the role of incorrect or excessive indulgence in activities of sense organs and locomotor organs as the foremost causative factor for apasmara. This is suggestive of disturbances in the knowledge coordination chain leading to lack of attainment of knowledge. This factor also indicates role of unhealthy regimens and behavior in patho-physiology of epilepsy. The factor underlies ignorance towards proper *dinacharya* (diurnal regimen), *ratricharya* (night regimen) and *ritucharya* (seasonal regimen). The lifestyle and behavior of a person is important for achieving normalcy in the psychic plane and for avoiding psychological disorders. This also suggests the inclusion of *prajnaparadha* (intellectual blasphemy) described in Sharira Sthana. *Achara rasayana* (code of conduct) should be followed as a therapeutic regimen in the management of apasmara. The

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<sup>362</sup> K Waller, T J Prendergast, A Slagle, R J Jackson. Seizures after eating a snack food contaminated with the pesticide endrin. The tale of the toxic taquitos. West J Med. 1992 Dec; 157(6): 648–651

psycho-neuro-biological basis of etiopathological factors causing neurological disorders is being extensively researched with positive outcomes. Psycho-social distress is an important underlying factor for such disorders through impairment of hypothalamo-pituitary-adrenal axis. The preventive measures to be included are correct and productive indulgence in the sensory and locomotor activities as per capacity of an individual. Psychotherapy is believed to be effective in the management of apasmara.

#### *Improper techniques*

Observance of improper *tantra* (techniques/methods) makes the person prone to apasmara and is the fifth causative factor. This includes iatrogenic factors such as improper follow ups of Panchakarma procedures leading to vitiation of *doshas* in the body. The other meaning of *tantra* might be related to spiritual practices that are related to the supernatural powers mentioned earlier as reasons for causing epilepsy. Improper use of these tantric therapies can result in epilepsy.

Iatrogenic causes can increase susceptibility to apasmara. Therefore all procedures should be followed properly in order to prevent complications.

#### *Incorrect postures and movements*

The sixth etiological factor constitutes of wrong postures and movements. Since the coordination of movements is regulated by *dhi-buddhi-smriti*, any imbalance in the sense organs-mind-intellect-spirits sequence not only impairs movement of limbs but also increases the propensity of getting afflicted with apasmara. Conversely, wrong postures and movements are a result of disturbances in the sense organs-spirits sequence that lead to incorrect attainment of knowledge with the manifestation of apasmara.

Uncomfortable sitting, sleeping, positioning, irregular, uncoordinated movements of body (e.g. improper dance, sports etc.) can predispose apasmara.

#### *Excessive degeneration and debility*

The seventh and last etiological factor i.e. excessive degeneration or debility may lead to pathogenesis of apasmara , pointing at *dhatukshayajanya vataprakopa* (vitiation of *vata* due to depletion of tissues) as a root cause. The degeneration might be a secondary condition resulting from other diseases. Hypo-perfusion and low levels of oxygen and metabolism could result in brain cell dysfunctions causing seizures. This is analogous to the concept of *ati upakshaya* in Ayurveda. Therefore, a clinical examination of depletion of tissues (*dhatukshaya*) could be considered as a treatment component in the management of apasmara.

Acute and severe electrolyte imbalances (hyponatremia, hypocalcemia and hypomagnesemia) frequently cause seizures.

The underlying etiology of other degenerative diseases should be considered while dealing with cases of epilepsy. In that case, management of epilepsy should be supported by proper nutrition, restorative, replenishing and rejuvenation therapies.

#### *Additional factors by Sushruta*

In addition to the above factors, Sushruta has quoted two more factors for predisposition of apasmara. *Veganigraha sheelanam* i.e. habitual suppression of natural urges and *gachchatam cha rajaswalam* i.e., having sexual intercourse with menstruating women can make the individual more susceptible to epilepsy. Recent research suggests that menotoxins secreted by the female body during menstruation significantly impact the psyche of a person accompanying that female.

On the first of these two factors, per Ayurveda, suppression of any of the thirteen types of natural urges may lead to various disorders. Suppressing natural urges leads to *vata*-dominant disorders and as *vata* is the regulator of mind-related activities, this consequently can result in neuropsychiatric disorders like apasmara. All the urges are stimulated, regulated and completed by the nervous system. Inhibition of these factors might lead to impairment of neurotransmission which can be a cause for neuropsychiatric disorders. Furthermore, suppression of urges can lead to accumulation of waste materials inside the body creating various diseases.

On the second factor mentioned here, the correlation between having an intercourse with menstruating women and getting afflicted with epilepsy needs to be researched further. Ayurveda strictly forbids sharing things with a menstruating woman, leave aside touching or having sexual relations with one. While there are reasons of following sacredness associated with this, sex with a menstruating woman is also indicative of exposure to unclean objects described earlier as the origin of apasmara. The psycho-neuro-endocrinological axis behind this view of Sushruta needs to be explored.

Thus, from the above descriptions, etiopathological factors of apasmara can be categorized into dietary factors, lifestyle factors, psychological factors, behavioral factors and iatrogenic factors. All the above predisposing factors can be scanned for epigenetic modifications with respect to personality types, behavior patterns and occurrence of apasmara in such cases. This will be useful in identifying the disease at a primitive stage, breaking the pathogenesis at an intermedial stage and prevention of further deterioration and complications at later stage. There might be certain epigenetic patterns/changes due to the above mentioned etiological factors, which make the person more susceptible to get affected.

The above enlisted etiological factors cause depletion in psychological strength (objectively measured as Intelligence quotient (IQ) and Emotional Quotient (EQ). In the era of distress, it is important to know the etiology of a disease in order to prevent its harmful effects. In order to preserve and increase the psychological strength, one shall avoid the causative factors for apasmara.

500px|Fig.2: Psycho-dynamics in Apasmara|thumb **Fig.2: Psycho-dynamics in apasmara**

### Six stages of pathogenesis of epilepsy (*shatkriyakala* for apasmara)

The pathogenesis of apasmara can be understood as below. [Fig.3: Schematic presentation of pathogenesis of apasmara]

500px|Fig.3a: Schematic presentation of pathogenesis of apasmara|thumb

500px|Fig.3b: Schematic presentation of pathogenesis of apasmara| thumb

#### *Sanchaya*

The first stage of accumulation of pathogenic factors (vitiated *doshas*) starts at their own sites. It is initiated right from the first exposure to unclean objects and other etiological factors mentioned earlier. This stage is characterized by mild disturbances in the psyche (*rajas* and *tamas*) and soma (*tridosha*).

#### *Prakopa*

If the individual excessively indulges in observing causative factors for a significant period, then the *doshas* proceed to the next stage of pathology i.e. *prakopa*. The *doshas* are vitiated at their own site. In case of apasmara, the *doshas* reside at the vessels, above the heart (the site of consciousness) in a leena (dormant) state [Cha.Sa.Chikitsa Sthana 10/6].

#### *Prasara*

Whenever the provocative emotional factors like worries, passion, anger etc. trigger these *doshas*, the vitiated *doshas* moves upwards affecting the sense and locomotor organs. This will present the *prasara avastha* (stage of spread) of the disease.

#### *Sthanasamshraya*

Thereafter in *sthanasamshraya avastha* of apasmara (change in stage, triggering premonitory signs and symptoms), the stridden *doshas* take pathways of sense organs and locomotor organs alerting manifestation of the disease. This is called the aura stage of epilepsy.

#### *Vyakta*

Then, the *vyakta* i.e. manifestation stage of apasmara is apparent due to excessive aggravation of *doshas*. The severity of paroxysms depends upon *sharira bala* (physical strength that helps do physical work as well as prevent manifestations of diseases, includes genetic predisposition as well), *hetu* (strength of causative agents depending upon their exposure) and *sattva bala* (strength of mind). The clinical manifestation will be a product of interactions between these factors. Common clinical features of the disease will start showing at this stage.

### *Bheda avastha*

*Bheda avastha* is the stage of differentiation depending upon the dominance of *doshas*. This will predominantly depend upon the genetic constitution of the person as well as the intake of alleviators and pacifiers of that particular *dosha*. If there are some pacification factors in between, then the progression of disease stops at that stage only blocking presentation of clinical features. If we critically analyze and compare the pathophysiology, it can be observed that unlike modern research, the brain did not figure in Charak's analysis of disease or their pathologic basis, nor did he emphasize the role of an exogenous or supernatural power (*agantuka*) factor in the causation of epilepsy. Charak has clearly mentioned heart, the abode of self and consciousness, as the origin for apasmara. In the seizure state, *doshas* stride upwards through *dhamanis* (vessels), affecting the *indriyas* (sense and locomotor organs) leading to erratic movements and loss of consciousness. Sushruta and Vaghbata have specifically mentioned the *samajnavahishu srotasu* (channels of consciousness) as the pathway of spread of *doshas* and as a site for the disease.

As per Ayurveda, the heart (and not the brain), is the locus or abode of the mind, consciousness and soul , and emotional factors are considered as some of the root causes for triggering epilepsy. The clinical presentation of epilepsy represents the derangement of functions of neurons of central nervous system, but the origin of this derangement shall have been predisposed much earlier due to psycho-pathological factors enlisted above. The acute onset of seizure can be precipitated due to emotional factors. The mechanism of this phenomenon and exact psycho-neuronal pathways behind this are worthy of study.

*Prana vayu* (*buddhi-hridaya-indriya-chitta dhruk*, i.e., regulation of intellect, heart, senses, mind functions), *vyana vayu* (seat at *hridaya* and regulating all types of movements), *udana vayu* (functions for energy and activities), *sadhaka pitta* (type of *pitta dosha*), *tarpaka* (type of *kapha*) and *avalambaka kapha* (type of *kapha*) are important to be considered as patho-physiological factors in this context.

### **Types of apasmara**

There are four types of apasmara depending upon the predominance of *dosha*. The first thing of significance is that all these are *sharira doshas* and not *manasa doshas*. This implies that apasmara is predominantly a somatic disease in which psychological factors play a role in pathogenesis. The important aspect of management should be focused at the somatic level supported by psychotherapy. The role of genetic constitution is important in the study of clinical manifestations of apasmara as well as their response either to treatments involving allopathic anti-epileptic medications or to Ayurvedic treatment modalities. The diagnosis of dominance of *dosha* is also important in deciding the treatment modalities prescribed in cases of apasmara. The epigenetic variation of the four types of apasmara and the categorization of etio-pathological factors to lead the epigenetic modification resulting into specific type of apasmara is worthy of study.

### *Agantu Apasmara*

Chakrapani comments that *Agantu* i.e. exogenous type of apasmara is excluded unlike *unmada*. Thus Chakrapani rules out the possibility of external factors like *deva*, *graha* etc. to cause apasmara and emphasizes the endogenous patho-physiology of apasmara. Charak describes the possibility of exogenous factors affecting the individual to suffer from apasmara in a verse described later. The management of apasmara due to exogenous factors is similar to that described in the management of *agantu* *unmada*.

### *Skanda graha and Skandapasmara*

Per Ayurveda, children get afflicted by apasmara due to the effects of any of *grahas* (Sanskrit, means seizing) such as *skandapasmara*<sup>363 364</sup> *skanda*, etc. knowledge of features of nine evil spirits which seize children is described, *skanda* and *skandapasmara* are the first two evil spirits which when affect a child, the clinical presentation is similar to that of epilepsy as narrated below.

A child seized by *skanda graha* has swelling of the eyes, smells like blood, has aversion to the breasts, distorted face, and eyelids or one eye having either loss of movement or more movements. The child could also be restless or irritable, have closed eyes, cry very little, hold its fists tight, and have hard bowel movement.

When the child is seized by *skandapasmara*, it loses and regains consciousness, is irritable, makes dancing like movements with arms and legs, eliminates stools and passes urine accompanied with sound (crying), yawns more and emits froth from the mouth. These are the features of a child seized by the “friend of skanda graham”, i.e., *skandapasmara*.

Similar to this, Vaghbata in Ashtanga Hridayam, has described the variants of the disease caused due to demons/evil spirits possessing the children. The cardinal signs of *graha* possession (or affliction) include continuous fever and crying. The general features are fear, too much yawning, movement of eyebrows, timidity, discharge of froth from mouth, upward gaze, biting of lips and teeth (grinding), wakefulness (absence of sleep), crying, moaning, aversion for the breast, change of voice, and scratching its own body or that of the mother by nails without any reason. [A.H Uttara Sthana 3/3-5]<sup>365</sup>

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<sup>363</sup> Sushruta. *Uttara Tantra*, Cha.27 Navagrahakritivijnaniya Adhyaya verse 8-9. In: Jadavaji Trikamji Aacharya, Editors. *Sushruta Samhita*. 8th ed. Varanasi: Chaukhambha Orientalia;2005.

<sup>364</sup> Vaghbata. *Uttara Sthana*, Cha.3 Balagrahapratishedam Adhyaya verse 6-11. In: Harishastri Paradkar Vaidya, Editors. *Ashtanga Hridayam*. 1st ed. Varanasi: Krishnadas Academy;2000.

In conventional medicine, epilepsy in children is described in detail. However, the etiology of some variants of epilepsy is mentioned to be idiopathic. As described in context of *skanda* and *skandapasmara*, the involvement of supernatural powers in causing apasmara is a matter of debate and falls in the purview of theology. Considering its importance and prevalence, apasmara of unknown etiology can be categorized as of the fifth type i.e. *agantu apasmara*. Sushruta and his commentator Dallhana support this view that any variant of the disease which occurs without any reason, acutely and without any rational pathology shall be considered as *agantu*. Per Charak [Cha.Sa.Chikitsa Sthana 10/53], the etiopathology, clinical features and management of this fifth type are on the lines of *agantu unmada*. As commented by Chakrapani, in case of *agantu* or *bhutapasmara*, the etiology of being seized by some external factors is considered primary and the involvement (*anubabdhā*) of *dosha* as secondary. It is important to note here that since clinical patho-physiology cannot take place without the involvement of *doshas*, therefore *agantu* should technically be considered as one of the four doshic variants of apasmara mentioned earlier, in order to follow the *sankhya niyama* i.e. rules of numeral classification.

### Premonitory signs of apasmara

The table 1 depicts the premonitory signs of apasmara described in the Ayurvedic texts. Each sign has a specific patho-physiology in terms of *dosha* and *dushya* behind its manifestation. The enlisted signs are the alerting signals or premonitory symptoms of apasmara before the onset of seizures. The probable system involved as per conventional medicine is also enlisted for every sign, so that it would be easier to consider the pathophysiological similarities and differences between the two medical streams.

| Pūrvarūpā               | Translation                                    | Dosha        | Dushya | System involved          |
|-------------------------|--|--------------|--------|--------------------------|
| Bhrūvyudāśa             | abnormal / twitching of eyebrows               | vata – rajas | majja  | nervous system [NS]      |
| Satatam akshi vaikrutam | constant abnormal/ irregular movements of eyes | vata – rajas | majja  | NS                       |
| Ashabda shravanam       | auditory hallucinations                        | vata – rajas | manas  | NS, psychiatric disorder |
| Lala prastrava          | excess secretion of saliva                     | kapha        | rasa   | NS, digestive system[DS] |

|                         |   |                       |                            | System involved                    |
|-------------------------|---|-----------------------|----------------------------|------------------------------------|
| Pūrvarūpā               | Translation   | Dosha                 | Dushya                     |                                    |
| Singhanaka<br>prastrava | excess<br>nasal mucus<br>discharge  | kapha                 | rasa                       | NS,<br>respiratory<br>system       |
| Anannabhila<br>shanam   | lack of<br>appetite   | kapha- Pitta          | rasa                       | DS, NS                             |
| Arochaka                | aversion to<br>food and<br>drinks<br>[anorexia]                                       | Kapha –pitta<br>–vata | rasa                       | DS,<br>Psychiatric<br>disorder     |
| Avipaka                 | indigestion   | pitta                 | rasa                       | DS, NS                             |
| Hridaya<br>graham       | heaviness<br>of<br>precordium/<br>congestion/<br>constriction<br>in cardiac<br>region | kapha, vata           | mamsa,majja                | NS, musculo<br>skeletal<br>system, |
| Kukshe<br>aatopa        | puffiness/<br>swelling in<br>the<br>hypogastric<br>region                             | vata, kapha           | rasa,<br>purisha,<br>mutra | DS, urinary<br>system              |
| Daurbalyam              | debility, loss<br>of strength   | kapha, vata           | rasa,<br>mamsa,<br>majja   | NS,<br>musculoskel<br>etal system  |
| Asthibheda              | splitting /<br>breaking<br>[pain]<br>sensation in<br>bones                            | vata                  | asthi, majja               | skeletal<br>system                 |
| Angamarda               | generalized<br>bodyache/<br>twisting/chur<br>ning pain in<br>body                     | vata                  | mamsa,<br>majja            | musculo-ske<br>letal system,<br>NS |
| Moha                    | confused<br>state of mind<br>[leading to<br>lack of<br>knowledge]                     | vata, kapha,<br>Tama  | rasa, majja                | NS,<br>psychiatric<br>disorder     |

|                   |  |                    |                    | System involved  |
|-------------------|--|--------------------|--------------------|--|
| Pūrvarūpā         | Translation  | Dosha              | Dushya             |  |
| Tamas darshanam   | black outs / temporary loss of vision without alteration in consciousness                                      | pitta, vata        | rasa-rakta-majja   | cardio-vascular/ cerebro vascular system, NS                       |
| Murchcha          | syncope / a fatal condition characterized by loss of consciousness and postural tone due to vitiation of blood | pitta, kapha       | rasa, rakta, majja | cardio-vascular/ cerebro vascular system, NS                       |
| Abhikshnam Bhrama | frequent vertigo/ dizziness  | pitta, vata, rajas | rasa, rakta, rajas | cardio-vascular/ cerebro vascular system, NS, psychiatric disorder |
| Swapne cha        | !  |                    |                    |  |
|                   | colspan="4">  In dreams  |                    |                    |  |
| Mada              | slight intoxication, becoming out of senses showing uncanny or abnormal behaviour                              | vata, rajas, kapha | rasa, rakta, manas | Cardio-vascular/ Cerebro vascular system, NS, psychiatric disorder |
| Nartana           | dancing  |                    | majja              |  |
| Vyadhana          | needling like sensation  |                    | majja              |  |
| Vyathana          | pain   |                    | majja              |  |

| Pūrvarūpā  | Translation  | Dosha | Dushya               | System involved |
|------------|--------------|-------|----------------------|-----------------|
| Vepana     | tremors      |       | majja                |                 |
| Patanadini | falling etc. |       | rasa-rakta,<br>majja |                 |

The abovementioned pre-clinical features are observed in the fourth stage of *shatkriyakala* (pathogenesis). These may be considered as aura in apasmara patients. These are important in view of prevention of apasmara progression to epileptic seizure. In conventional medicine text books, some of the above signs like auditory and visual hallucinations are referred. These signs need to be searched upon for their prevalence, categorization as per *dosha* dominance, involvement of *dosha* attributes in order to establish precise guidelines for early prevention and management of disease.

Table 2: Differentiation between types of apasmara

| Characteristic feature                                     | Vataja Apasmara  | Pittaja Apasmara  | Kaphaja Apasmara  |
|--|--|---|---|
| Frequency of attacks                                       | Maximum [Twelve days]  | More [Fifteen days]   | Less [One Month]  |
| Time required to lose consciousness                        | Minimal  | Less  | More  |
| Time required to regain consciousness                      | Minimal  | Less  | More  |
| Duration of attack   | Minimal  | Less  | More  |
| Clinical appearance of nails, eyes [sclera], face and skin | Aruna[ downy red], Shayva[gray] , parusha [rough]                            | Peeta [yellowish], harita [Greenish], Haridra [turmeric yellow], Tamra [ coppery]           | Shukla [whitish/ pallor]  |
| Patient experiences aura of / vision of / views of         | Anavasthita [unstable], Chapal [Moving/fickle] parusha [rough], Ruksha [Dry] | Rudhirokshita [blood], bleeding, terrifying (which is also injurious) Bhairava [frightful], | Shukla[ white], Guru [ heavy / large in size], Snigdha [unctuous] looking objects |

|  |   |  |  |
|--|---|--|--|
| Characteristic feature                 | Vataja<br>Apasmara<br>Rupa [ looking objects]<br>Vikrutanam [abnormal faces] [AH]   | Pittaja<br>Apasmara<br>Aadipta [burning] and Rushita [angry] looking objects | Kaphaja<br>Apasmara  |
| Clinical picture of abnormal movements | Vishama Vinata<br>Angulim [irregularly contracted fingers]<br><br>Anavasthita pani Padam [ instable or continuous shaking of upper and lower limbs]<br><br>Parito Vikshipati Angam [ places body parts here and there irregularly/ involuntary movements]<br>[AH] | Not given specifically   | Anati cheshtam [ not more movements/ less movements]<br><br>Alpa Cheshtam [less abnormal movements ]<br>[AH] |
| Character of discharge from mouth      | Phenam [froth]  | Not mentioned specific   | Lalam Bhuyasi [excess saliva discharge]  |
| Temperature of body                    | Not specific  | Tapa [rise in temperature/ hyperthermia]<br>[Su]                             | Sheeta Anga [cold body/hypothermia]<br>[Su]  |
| Other Specific features                | Utpinditaksham [ bulging of eyes/ upside rolling of eyes]<br><br>Asamna Vilapantam [incoherent speech]  | Avakujantam [epileptic cry]<br><br>Aasphalayanta m Bhumim [rubbing earth]    | Patantam [falling down]<br><br>Hrullas [nausea]<br>[Su]  |

| Characteristic feature | Vataja Apasmara   | Pittaja Apasmara                                     | Kaphaja Apasmara             |
|------------------------|---|--|------------------------------|
|                        |   | Trushna [excess thirst]                              | Nidrarta [excess sleep] [Su] |
|                        | Ateeva<br>aadhamatgreeva<br>m [excess<br>heaviness and<br>rigidity in neck<br>region] | Sweda [excess<br>perspiration]<br>[Su]               |                              |
|                        | Aavidhdha<br>Shiraskam<br>[bending of<br>head towards<br>one side]                    | Murchcha [<br>syncope] [Su]                          |                              |
|                        | Kampate [<br>trembling/convulsions]   | Dhunvan<br>Angani [shakes<br>all body parts]<br>[Su] |                              |
|                        | Vepamano [<br>tremors]  | Vivhala<br>[agitated] [Su]                           |                              |
|                        | Dantan<br>pradashet<br>[grinding of<br>teeth]   |  |                              |
|                        | Shwasiti<br>[increased<br>respiration/<br>dyspnea]                                    |  |                              |
|                        | Sakthi<br>Sphurana<br>[contraction like<br>sensation in<br>thigh region]              |  |                              |
|                        | Viswaram<br>[epileptic cry]<br>[AH]   |  |                              |
|                        | Virupam [AH]  |  |                              |

Su: As described by Sushruta in Sushruta Samhita AH: As described in Ashtang Hridaya

The specific features of all the four types of apasmara are described in Table 2. *Vata* type of apasmara manifests itself with repeated seizures of short duration and increased frequency of attacks. The speed, severity and abnormality of movements are more in this case. This is due to *chala* (movable), *laghu* (light), and *sukshma* (minute) attributes of *vata dosha*. *Vata* is the initiator of all activities including those of the body and the mind. The regulation and coordination of the sequence of sense and locomotor organs – mind-intellect-soul for attainment of knowledge is performed by *vata*. *Prana vata*, *udana vata* and *vyana vata* are involved in the pathophysiology of apasmara. The clinical manifestation of *vataja* apasmara may be due to repeated, excess, hyposynchronous discharges in neurons of the central nervous system. Transient hypoxia leading to dysregulation of brain functioning, and neurological diseases similar to epilepsy syndromes can be categorized under this type of apasmara.

In *pitta apasmara*, the frequency, duration of paroxysms will be comparatively less than those observed in *vata* type. The *ushna* (hot) and *tikshna* (acrid) attributes of *pitta* are responsible for the pathology of paroxysms. *Sadhaka pitta* located at the heart and the functions responsible for accomplishment of activities are responsible for this apasmara. *Tamahpravesha* is a sign primarily of *pitta*-dominance in which metabolism or transformation at the cellular level might be an underlying pathology. Derangement of *sadhaka pitta* implies the decrement or depletion in psychological performance in apasmara patients. Since *pitta* is responsible for all metabolic activities, the derangement of metabolism at the cellular level is an important pathological factor and the enzymatic pathways might be held responsible. The types of epileptic syndromes originating due to metabolic disorders like hepatic encephalopathy can be categorized under this type. Changes in body temperature, excess thirst, and perspiration are specific differentiating features of *pitta apasmara*. The cerebral conditions due to derangement of metabolisms can be enlisted here. In cases of *kaphaja apasmara*, the *sthira* (stable), *manda* (slow), and *snigdha* (unctuous) attributes of *kapha* are responsible for delayed onset, prolonged duration as well as minimal frequency of paroxysms in apasmara. Excessive sleep and hypothermia specifically suggest *kaphaja apasmara*. Hypoperfusion and hypovolemic conditions leading to cerebral dysfunction can be considered as attributes of *kaphaja apasmara*.

Finally, the *sannipatika* type of apasmara presents itself with complex mixed features due to overlapping of all *doshas*. The prognosis is poor leading to incurability of disease. This might be a mixed presentation of neuronal, endocrinial, circulatory and metabolic pathways.

While considering the clinical pictures of a disease, the attributes of *doshas* responsible for variation in pathologies at somatic and psychological level should be emphasized. Important mechanisms of loss of consciousness and abnormal movements at the somatic level, and impairment of intelligence and memory at psycho-pathological levels needs to be focused. The epigenetic patterns related to particular signs and symptoms originated from *doshic* pathologies can be researched to reveal new treatment methods and management aspects. The genetic constitution of a person plays a significant role in making him prone to developing certain type of disorders. Therefore, as discussed

above for *vata apasmara* can become more apparent after taking *vata*-aggravating diet and lifestyle in *vata prakriti* individuals that can get alleviated by using *vata shamana* (i.e., *vata*-pacifying) diet and lifestyle. Furthermore, if anti-epileptic drugs are used more judiciously depending upon the *dosha* and *prakriti*-specific diagnosis, then the treatment regimen can be made much more precise leading to beneficial results in patients. As discussed in the section of predisposing factors, the preventive lifestyle and dietary regimens can be designed to prevent incidence of epilepsy, reduce the dose of drugs with supportive diet and lifestyle therapy and prevent further progression of disease. Therefore, training of epileptics regarding causative and avoidable factors is of utmost importance. The epigenetic variations in epileptics due to enlisted causative agents should be studied as a part of genomic and proteomic research.

### Differential diagnosis of apasmara

Other disorders such as *mada* (intoxication) and *murchcha* (syncope) also show the signs of loss of consciousness, but ones without convulsions. In *unmada*, there is impairment of *buddhi*, and it does not manifest itself with loss of consciousness. *Akshepa* (abnormal movements) is a *vata*-predominant disease characterized with convulsions, but the consciousness is intact and there is no froth discharge. This makes apasmara a distinct disease apart from other disorders.

### Prognosis of apasmara

Epilepsy due to vitiation of all the three doshas and showing all clinical features of the *sannipatika* variant (i.e., of all the other three *doshic* variants) is chronic in nature and that, which has occurred in a person with excess degenerative condition and depleted *dhatus*, is considered incurable. In case of degenerative conditions and chronic diseases, any case of apasmara due to vitiation of even a single *dosha* can be considered incurable.

Bad prognostic signs of apasmara patients can often turn fatal. If one, in his wakeful state sees darkness where there is no darkness and hears all types of sound even when there is no sound, he succumbs to apasmara. If a patient, while dancing in an intoxicated state is caught by a *preta* (soul of a dead person) with his head facing downwards, he is sure to succumb to an attack of apasmara.

### Reasons behind aggressive and dormant stages of apasmara

From the above sections, it is clear that apasmara occurs in episodes. The patient after seizure regains consciousness like waking up from sleep (*suptavat pratibuddhyate*). Therefore, there are two stages of disease : one is aggressive stage of *doshas* and the second is dormant stage of *doshas*. Sushruta describes that there are two forms of pathogenesis: One form follows the six stages viz. *sanchaya* etc. (*kramopayogad*) of the disease in sequence and takes considerable time to manifest disease with gradual onset. The other form manifests acutely in a short time (*kshanikatwat*). The first form is seen in *nija* (endogenous) pathologies of disease. The other form is seen in *agantu* (exogenous) apasmara. Sushruta gives examples of a seed in the ground that sprouts

only during *sharad ritu* (autumn) though it rains at other times. Analogous to this example, the virulent form of the disease develops due to a *dosha* getting aggravated in very short time and manifesting its different symptoms due to some factors catalyzing the accelerated aggravation. It is quite clear from the detailed descriptions in this chapter, though, that all forms of apasmara are caused by *dosha* only. [Su.Sa.Uttara Tantra 61/1821]

The example states the fact that favorable environment for precipitating factors plays major role in disease episodes. Depending upon the defense system of the body – its natural and acquired immunity - as the background for disease and factors aggravating the *dosha* as offending agents, the interaction between the two defines severity, intensity and frequency of occurrence of episodes of disease as shown in chart. [ Fig.4: Manifestation of episodes ] 500px|Fig.4: Manifestation of episodes|thumb Therefore, for prevention and management of a disease, it is important either to build up the strength of defense system i.e. improving the *sharira bala* (physical strength) and *sattva bala* (mental strength), or pacify/weaken the aggravating causative factors or both.

## Management of apasmara

Although the management of apasmara is described further in Chikitsa Sthana, principles of management are given in this chapter. The curable types of epilepsy should be carefully treated with strong elimination and alleviation therapies according to the vitiated dosha. *Doshas* present in the vessels above the heart need to be removed which require strong measures requiring medicines having higher penetrability, higher potency and highest bio-availability. With this objective, *tikshna samshodhana* (strong elimination) and *samshamana* (alleviation therapies) are employed. When extrinsic causative factors are involved (*agantu apasmara*), then *mantras* etc., will be useful.

The rationale behind advocating strong elimination therapies is the deeper location and excess vitiated state of *doshas*. As described in patho-physiology earlier the *dosha* are in dormant state in the vessels above heart. Therefore to remove these *dosha*, strong eliminatory therapies are needed. The strength of the prescribed medicine is decided by their higher penetrability, potency and bio-availability.

## Practical application of principles

All the abovementioned principles are practically applicable. The methods for further research include the following:

1. Supporting the clinical presentation with data of research papers on survey studies
2. Preparing Checklist and proforma for
  1. Diagnosis of states susceptible for suffering from apasmara
  2. Diagnosis of aura stage or premonitory stage of apasmara for early identification of status epilepticus in order to train the patient and arrange necessary preventive measures

3. Diagnosis of apasmara and specific types of apasmara based on clinical presentation

### Research areas

1. Evaluation studies of various epigenetic pathways in conjunction with the patho-physiology of apasmara
2. Clinical correlation with modern radiological investigations like CT etc. and EEG for better clinical diagnosis of apasmara
3. Enlisting newly introduced disease commonly observed in society into the umbrella of apasmara e.g. Alzheimer's dementia, depression etc.
4. Retrospective analyses of all signs and symptoms enlisted in the modern text books and formulating probable *samprapti* / pathophysiology (*dosha-dushya sammurchchna*) based on *dosha* dominance behind manifestation of each sign and symptom can be formulated for better understanding in Ayurvedic perspective.
5. Assessment criteria in Ayurveda and modern science, modern investigation methods and technologies, biomarkers which are well established may be enlisted.

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